

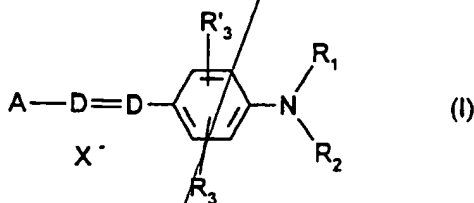
WHAT IS CLAIMED IS:

1. A ready-to-use composition for dyeing keratin fibers, comprising:

(i) at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, and

(ii) at least one thickening polymer;

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals; or

R₁ and R₂ may form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from

oxygen and nitrogen, which can be substituted with at least one radical chosen from C₁-C₄ alkyl radicals;

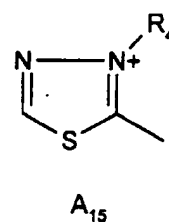
R₃ and R'₃, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄ alkoxy radicals and acetyloxy radicals,

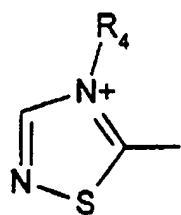
X⁻ is chosen from anions,

A is chosen from structures A₁ to A₁₉ below:

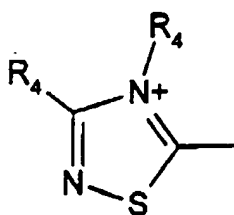
669020-50764260

pub
A cont'd

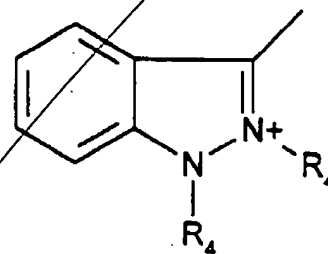




A₁₆

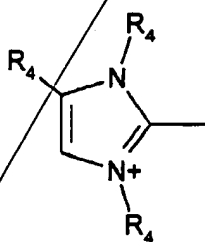


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

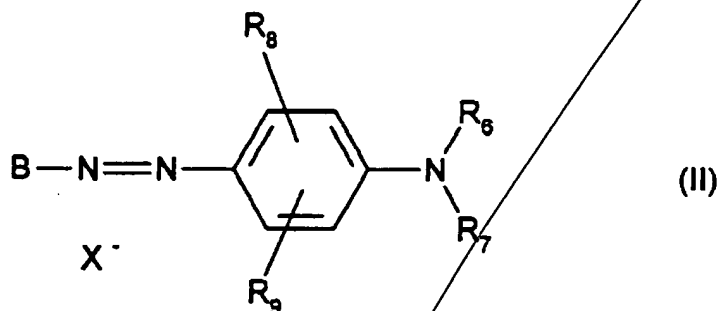
R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

compounds of formula:



in which:

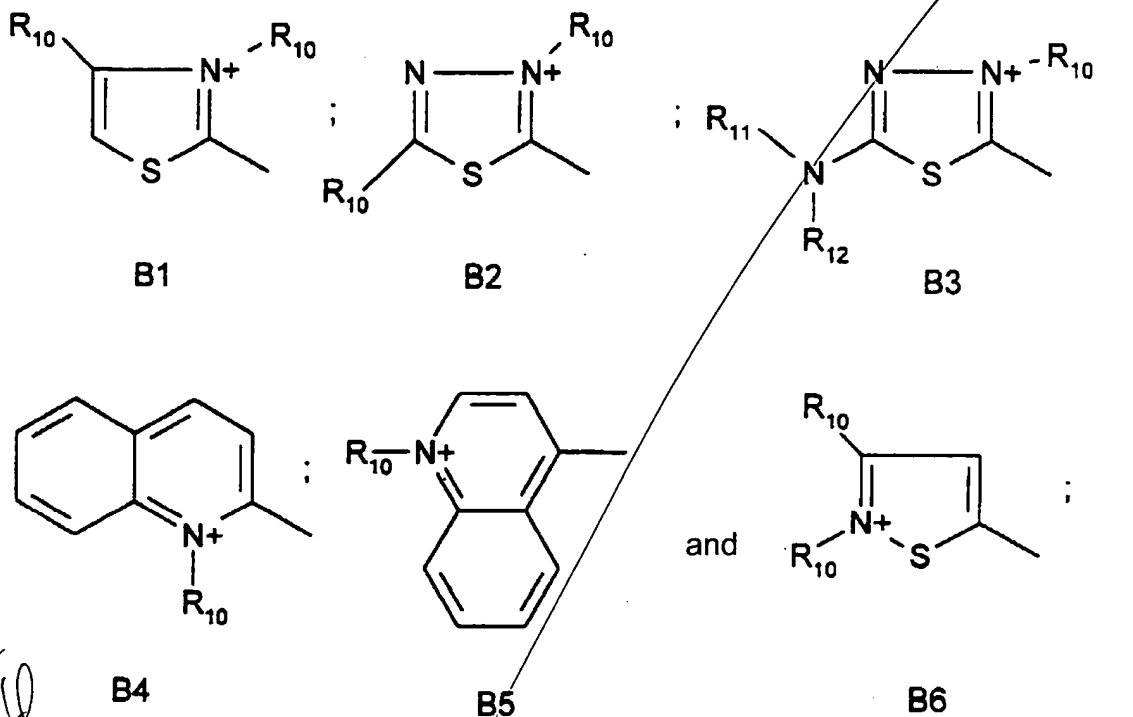
R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

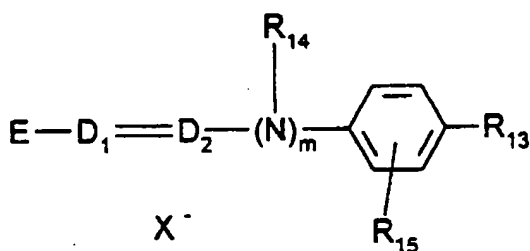


in which:

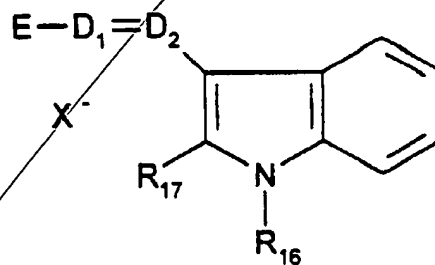
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, $\text{C}_1\text{-C}_4$ alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, $\text{C}_1\text{-C}_4$ alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from $\text{C}_1\text{-C}_4$ alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and $\text{C}_1\text{-C}_4$ alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a $-\text{CH}$ group,

m is 0 or 1,

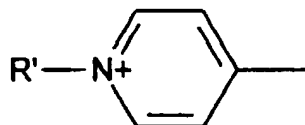
wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

665020-5076760

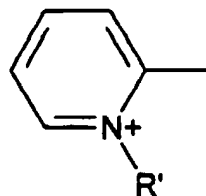
-CH group and m is 0,

X⁻ is chosen from anions,

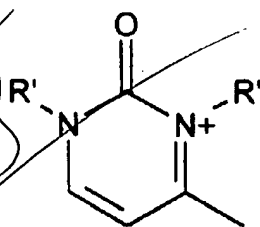
E is chosen from structures E₁ to E₈ below:



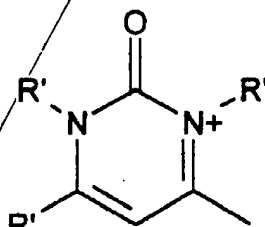
E1



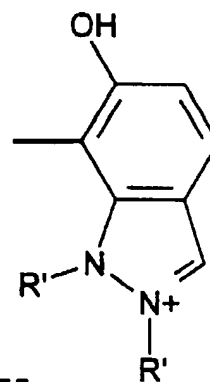
E2



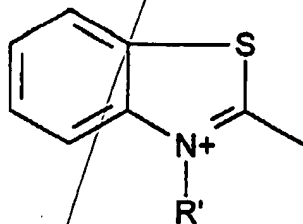
E3



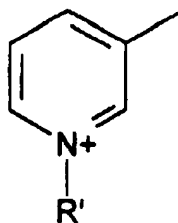
E4



E5

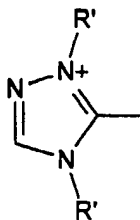


E6



E7

and

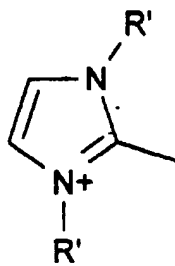


E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be

further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

and

- and wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

2. The composition according to Claim 1, wherein said keratin fibers are human keratin fibers.

669220-507-071260

Sub
A' cont

3.
§. The composition according to Claim 2, wherein said human keratin fibers are hair.

4.
§. The composition according to Claim 1, wherein in formulae (I), (II), (III) and (III'), the C₁-C₄ alkyl radicals and the C₁-C₄ alkoxy radicals are chosen from methyl, ethyl, butyl, methoxy and ethoxy radicals.

5.
§. The composition according to Claim 1, wherein said anions are chosen from chloride, methyl sulfate and acetate.

6.
§. The composition according to Claim 1, wherein said halogen atoms of R₃, R'₃, R₈, R₉, R₁₃, and R₁₅ are chosen from bromine, chlorine, iodine, and fluorine.

7. The composition according to Claim 1, wherein said at least one thickening polymer comprising at least one sugar unit is chosen from:

- (ii)₁ - nonionic guar gums;
- (ii)₂ - biopolysaccharide gums of microbial origin;
- (ii)₃ - gums derived from plant exudates;
- (ii)₄ - pectins;
- (ii)₅ - alginates;
- (ii)₆ - starches; and
- (ii)₇ - hydroxyalkylcelluloses and carboxyalkylcelluloses.

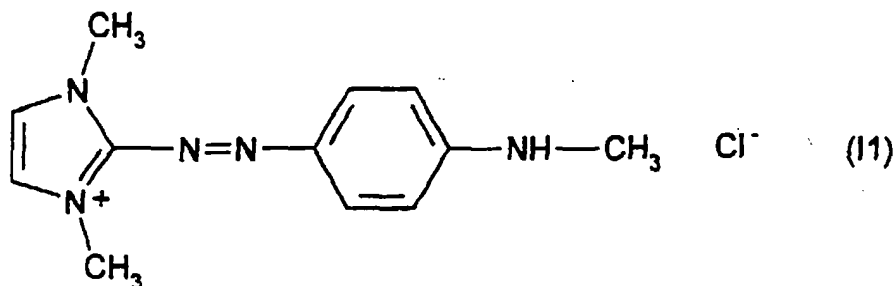
8.
§. The composition according to Claim 1, wherein said

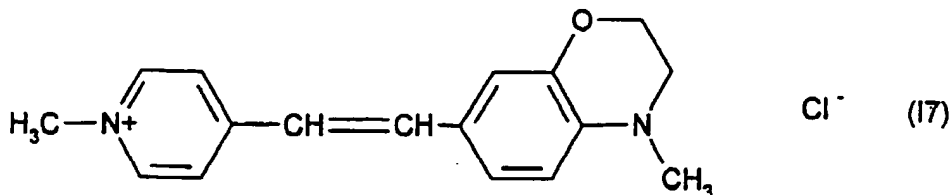
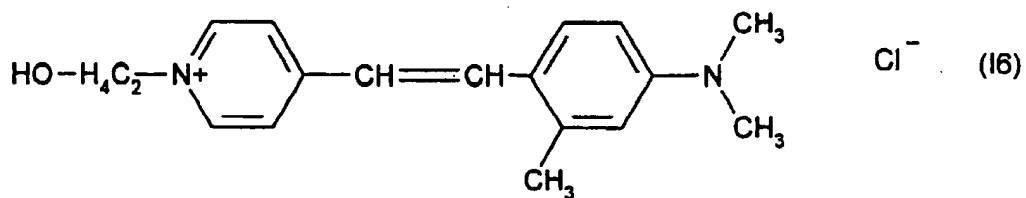
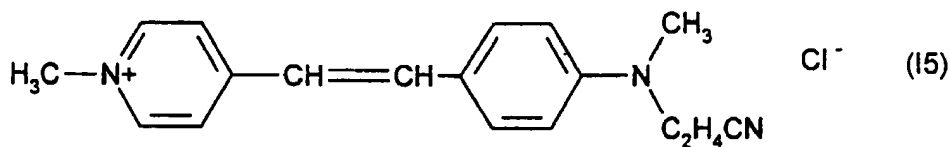
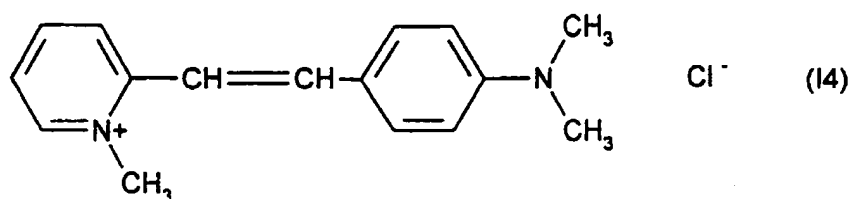
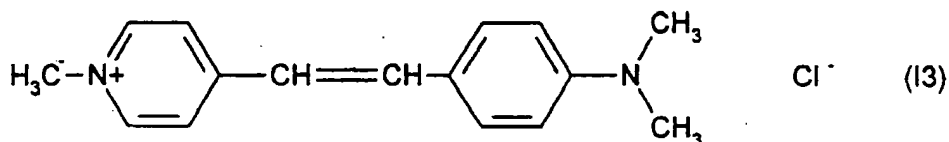
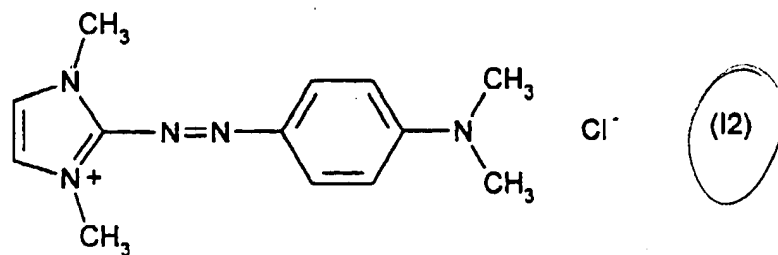
0034905-02000
050764E60

biopolysaccharide gums of microbial origin are chosen from scleroglucan gum and xanthan gum.

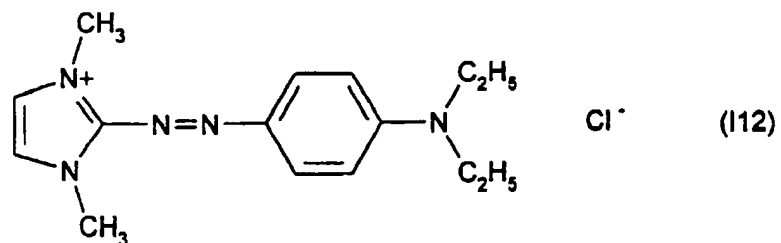
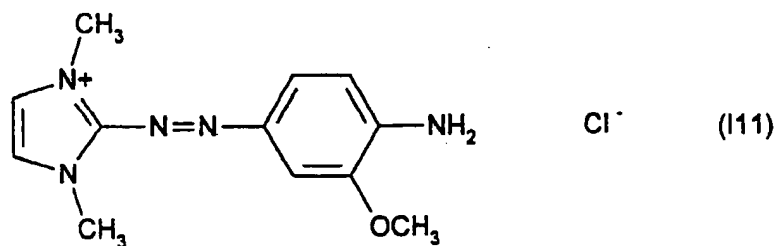
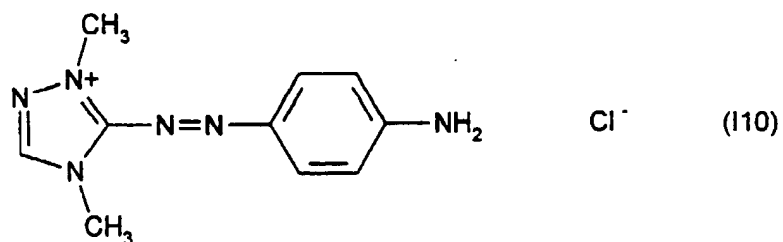
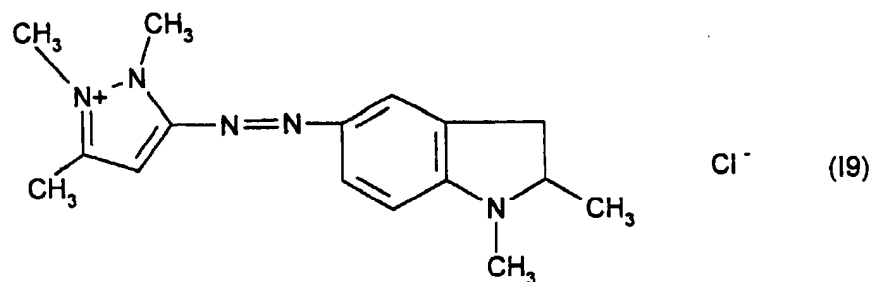
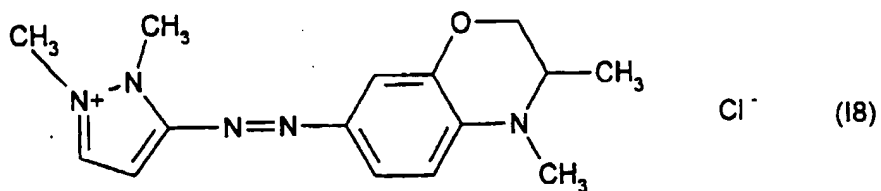
⁸ The composition according to Claim ¹ ~~7~~, wherein said gums derived from exudates are chosen from gum arabic, ghatti gum, karaya gum, gum tragacanth, carrageenan gum, agar gum and carob gum.

⁹ ~~10~~ The composition according to Claim 1, wherein said at least one cationic direct dye of formula (I) is chosen from compounds of formulae (I 1) to (I 54) below:





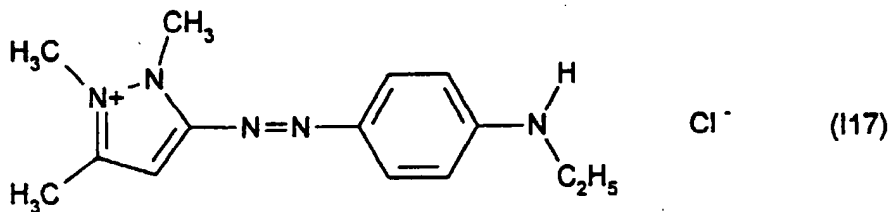
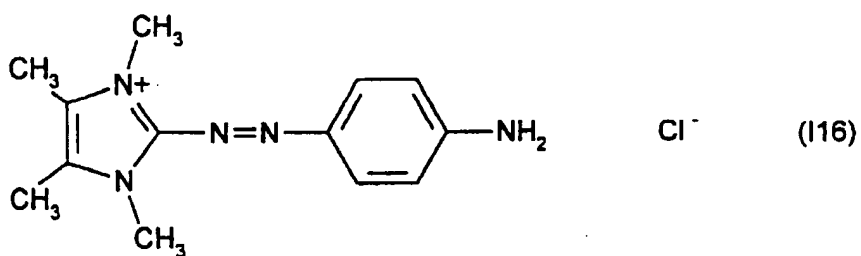
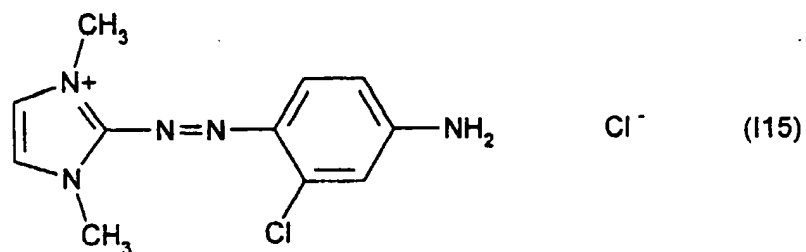
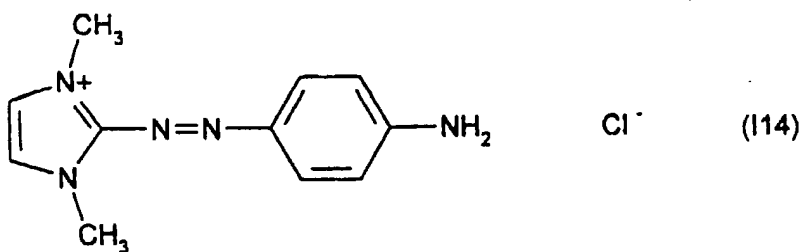
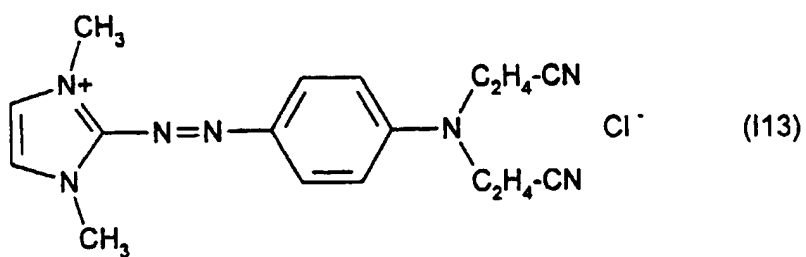
05725.0441-00000



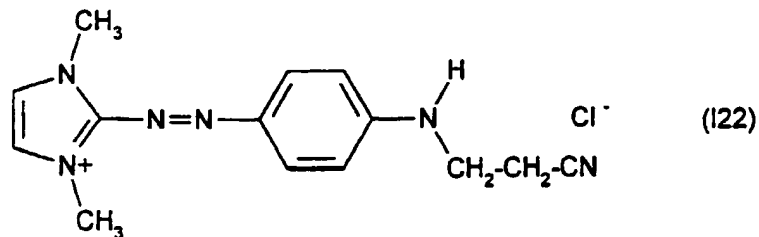
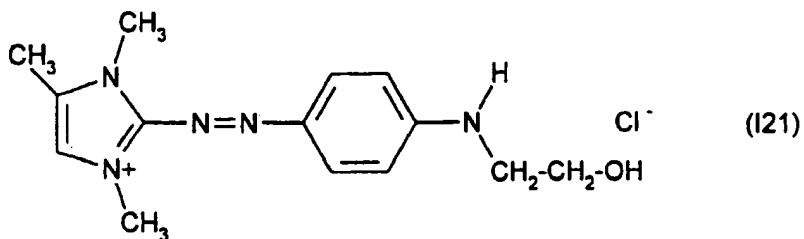
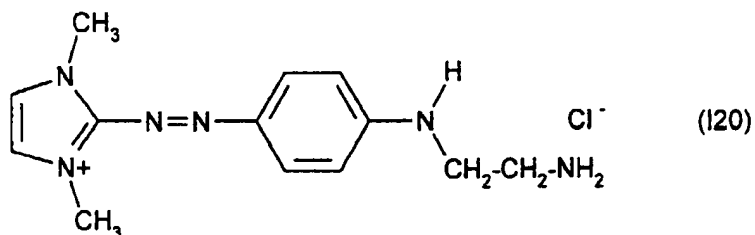
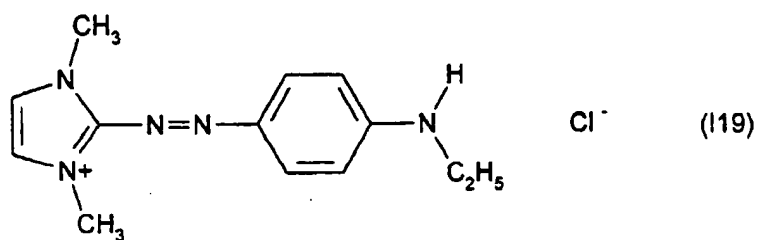
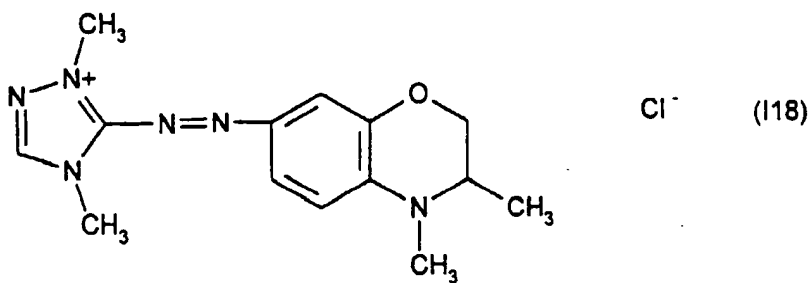
668020" 50764260

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



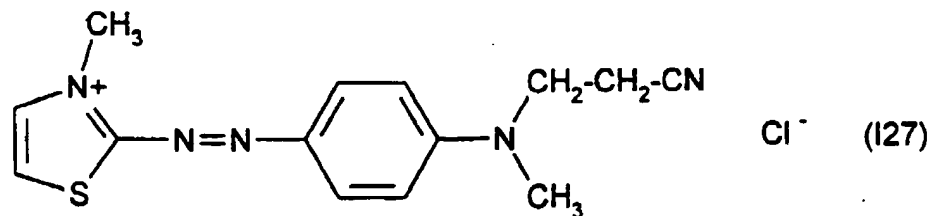
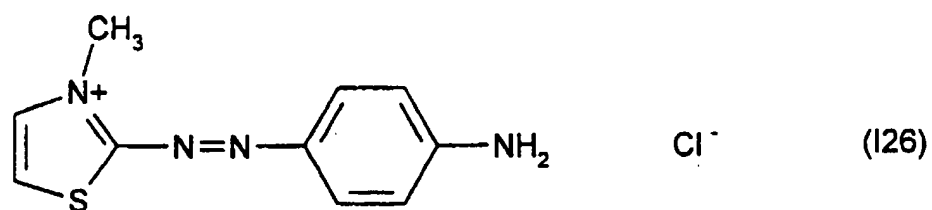
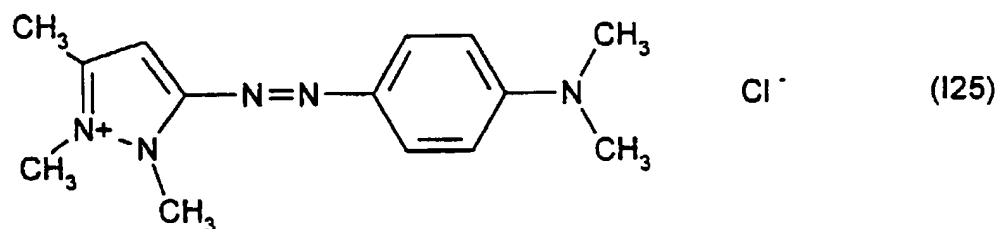
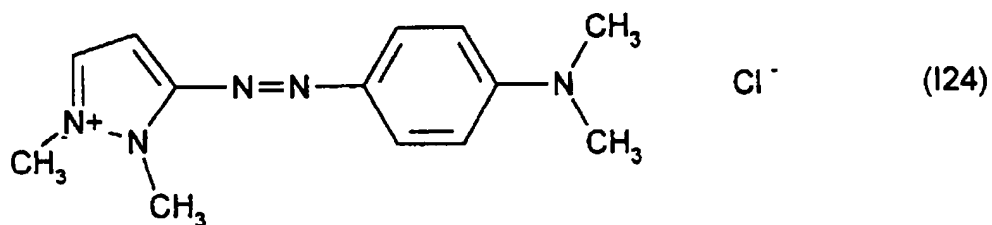
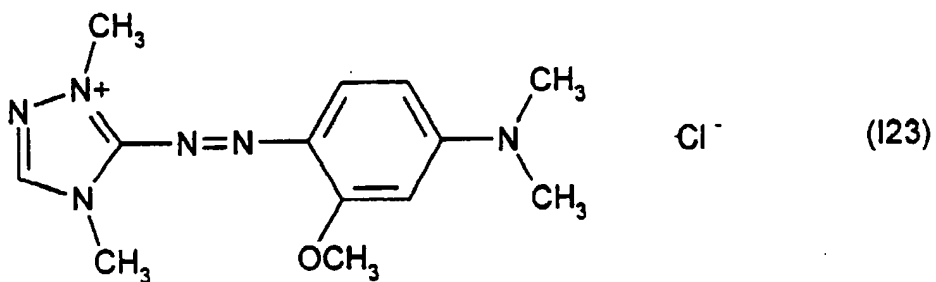
000020-50761E60



668020-50761E60

LAW OFFICES

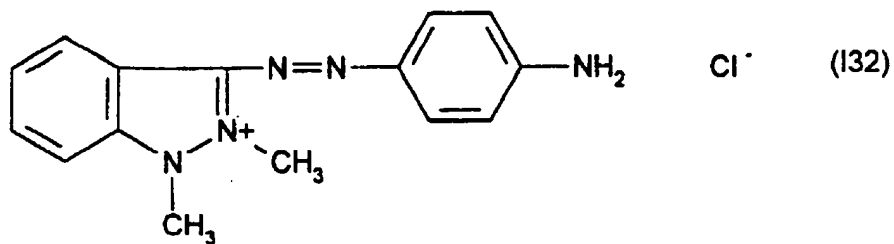
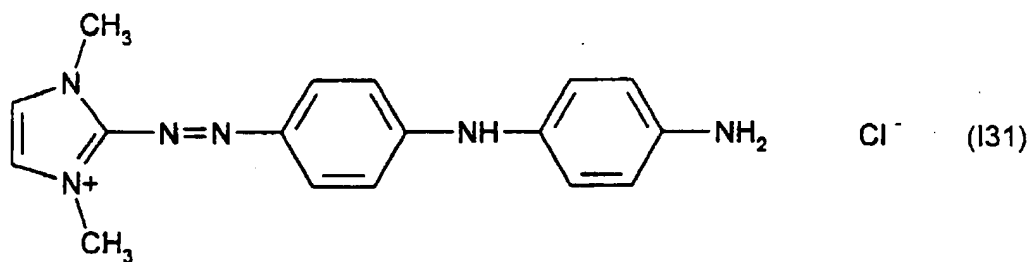
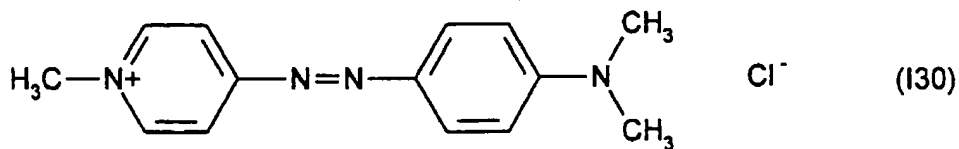
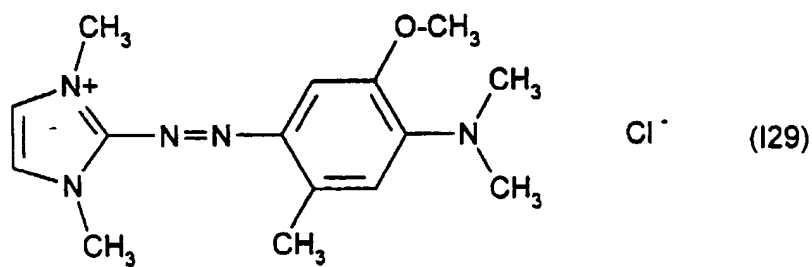
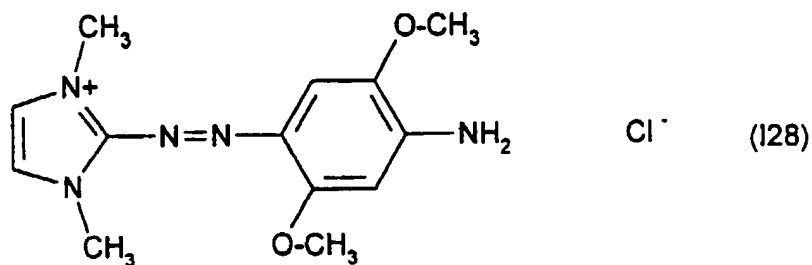
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

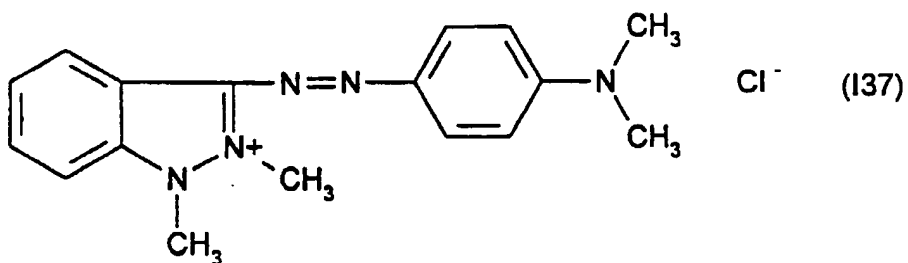
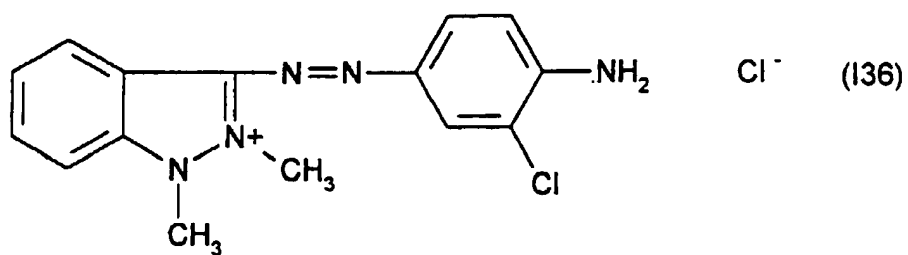
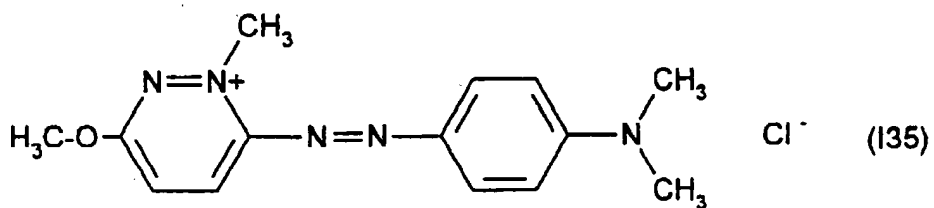
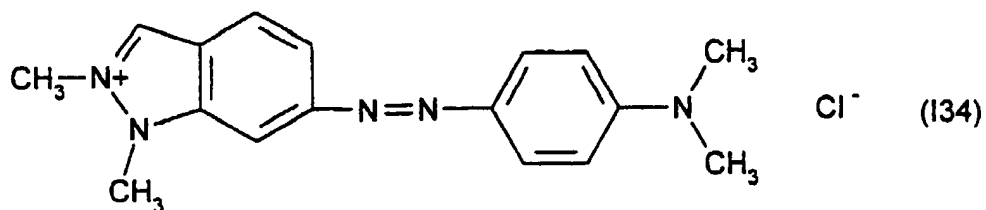
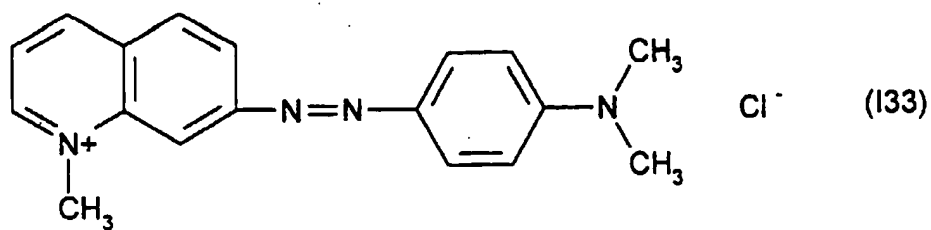


6680.00-50764260

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

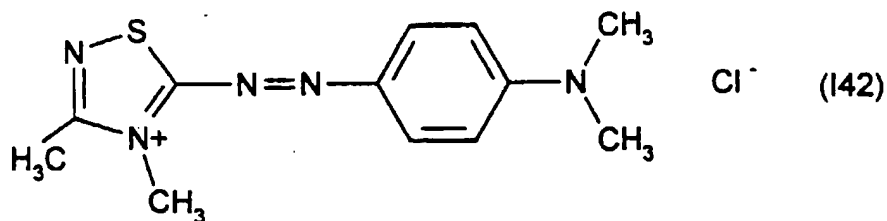
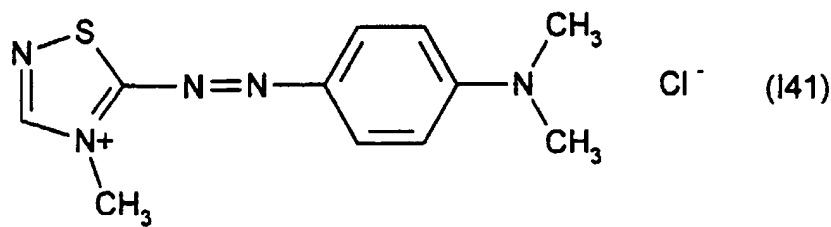
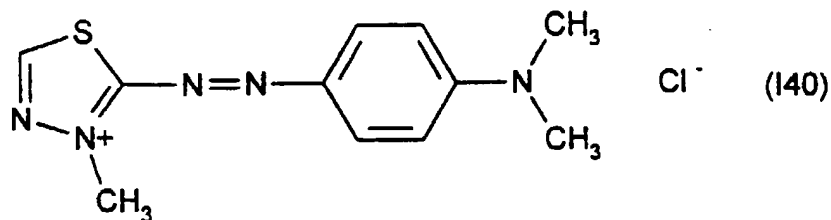
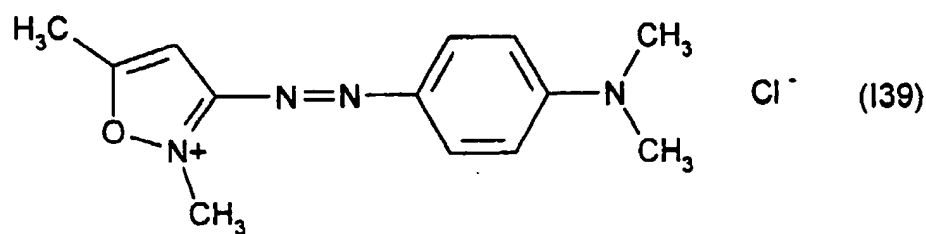
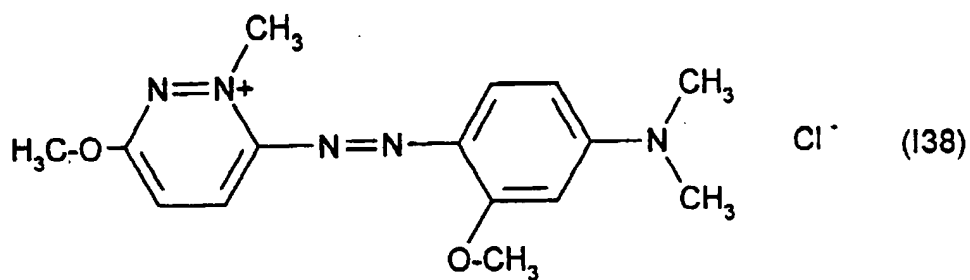




000020-50767E60

LAW OFFICES

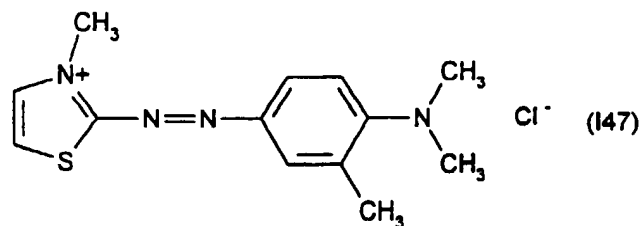
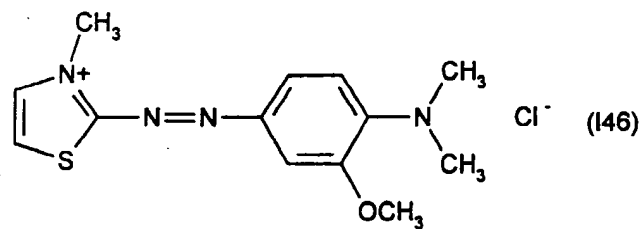
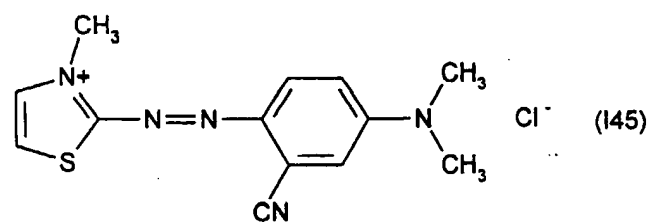
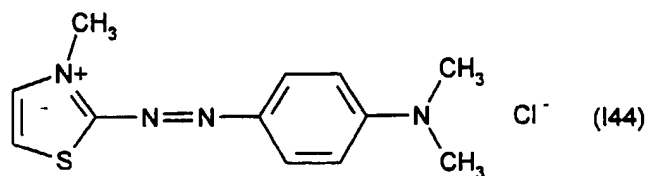
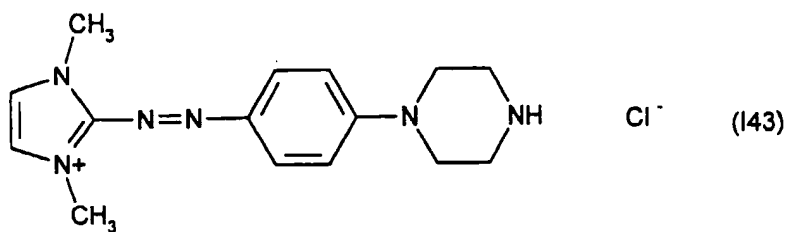
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



00000050764660

LAW OFFICES

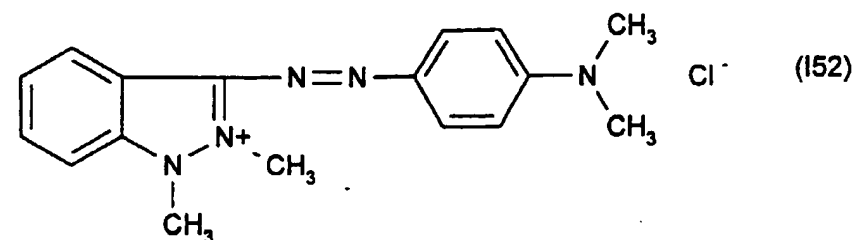
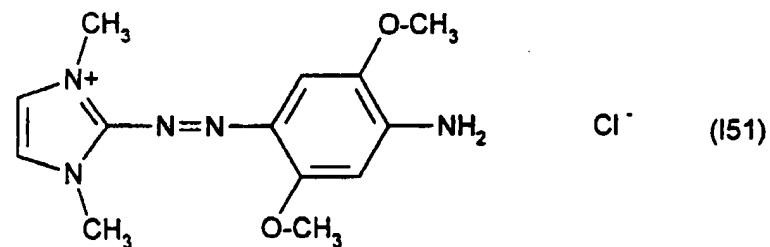
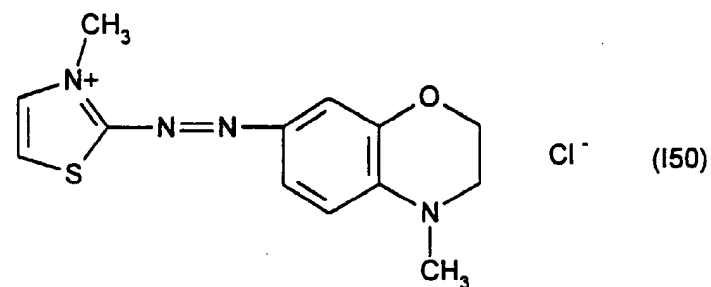
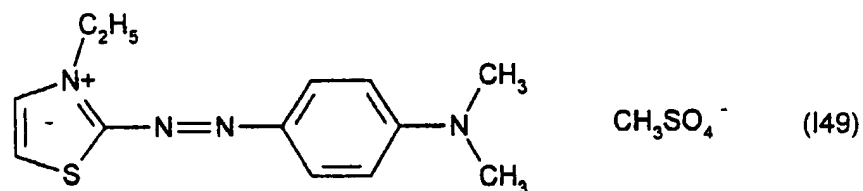
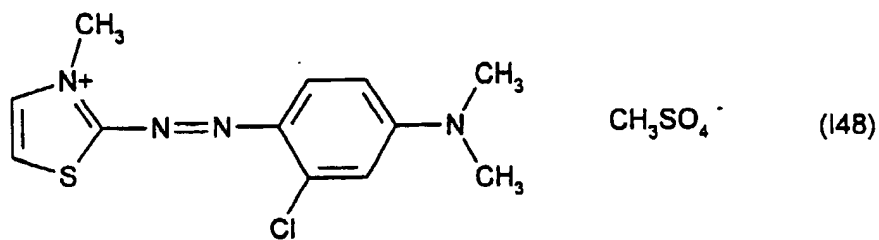
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



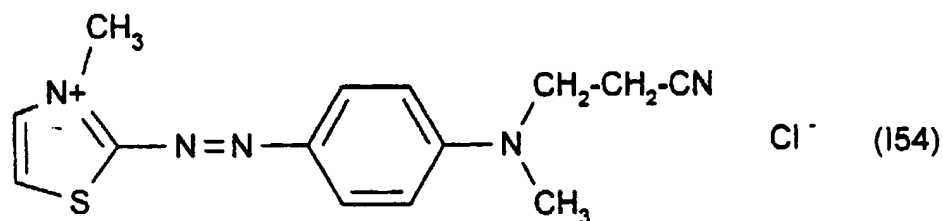
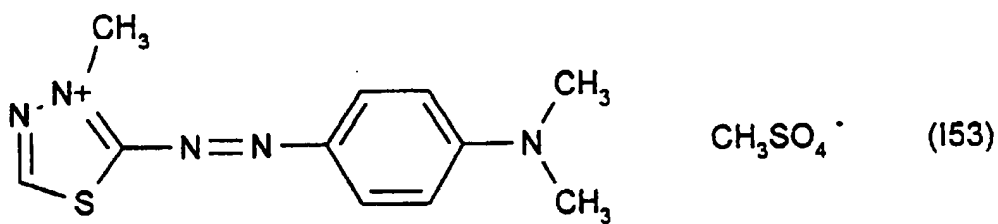
668020-5076766

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

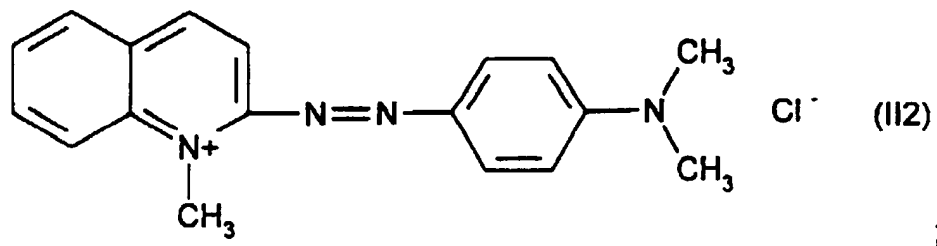
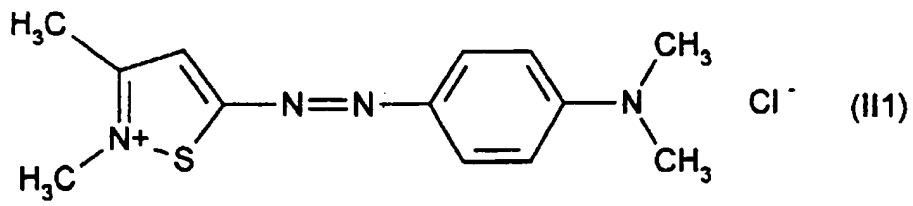


668020-50764E60



11. The composition according to Claim 10, wherein said at least one cationic direct dye is chosen from said compounds of formulae (I1), (I2), (I14) and (I31).

12. The composition according to Claim 1, wherein said at least one cationic direct dye of formula (II) is chosen from compounds of formulae (II1) to (II9) below:

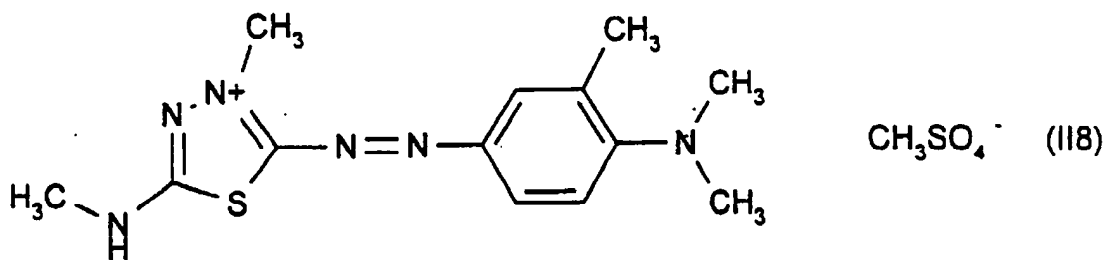


663020" 50764E60

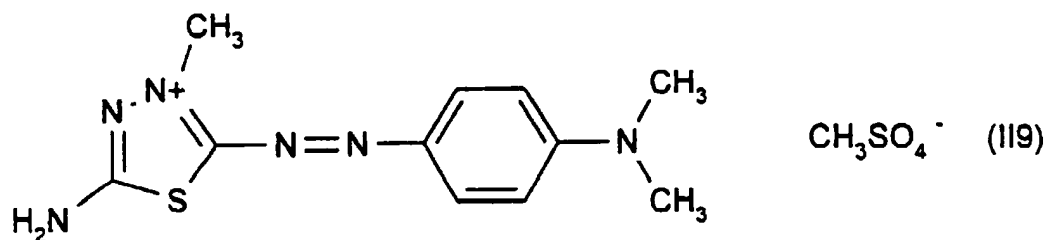
LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



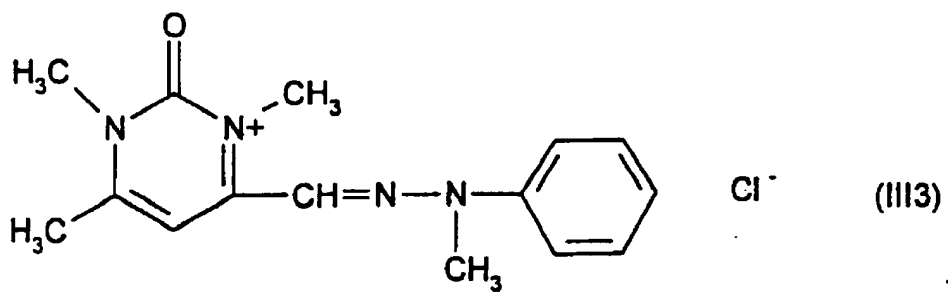
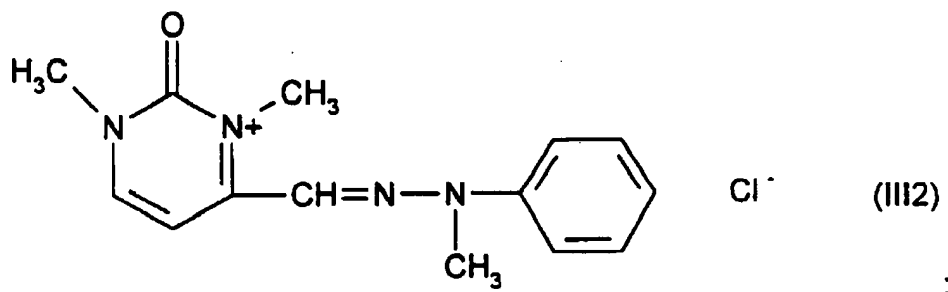
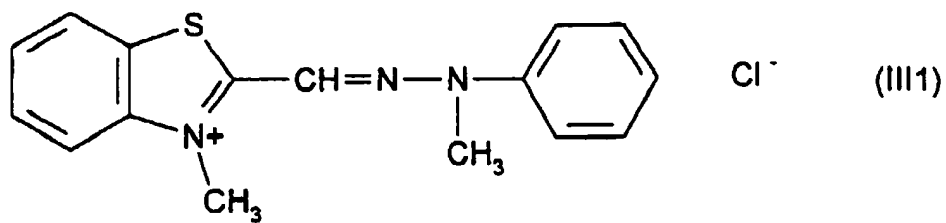


; and

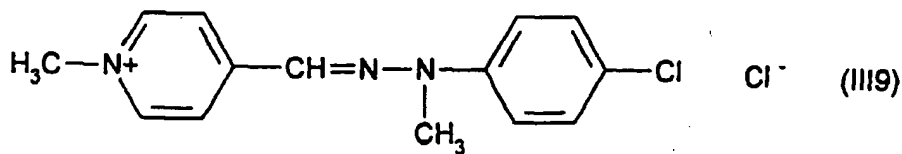
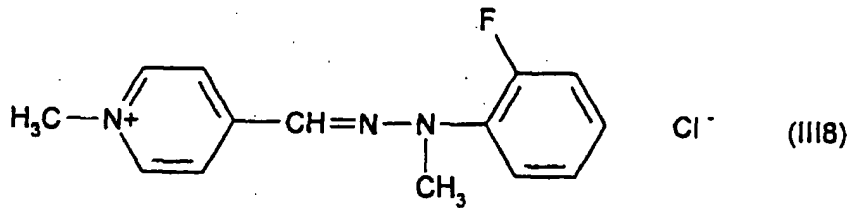
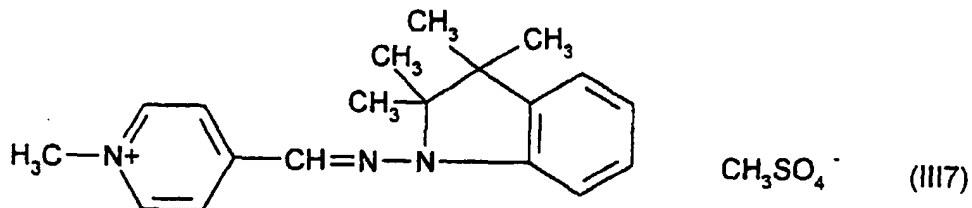
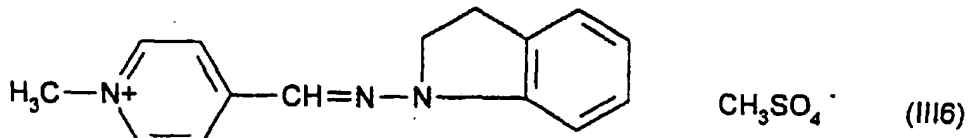
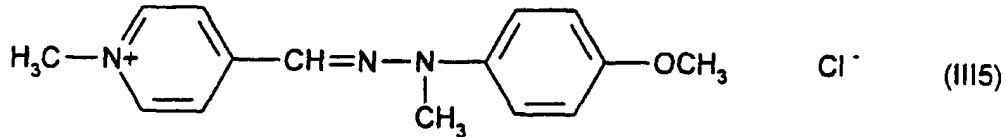
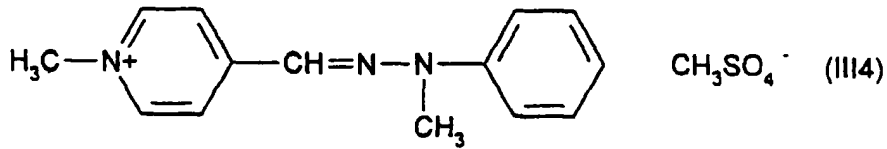


¹²
43

The composition according to Claim 1, wherein said at least one cationic direct dye of formula (III) is chosen from compounds of formulae (III1) to (III18) below:

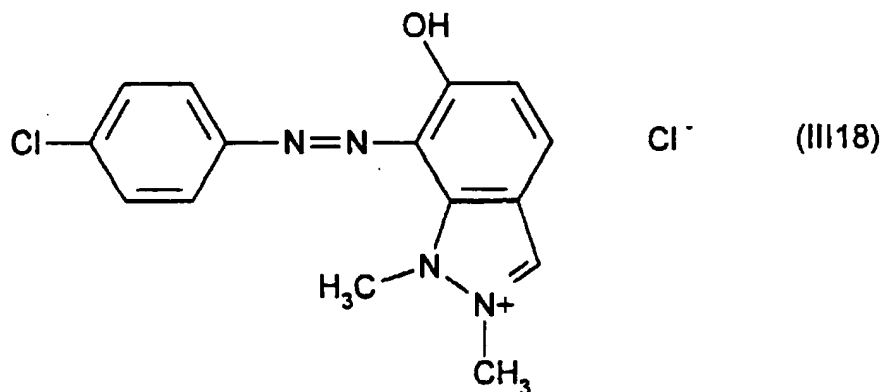
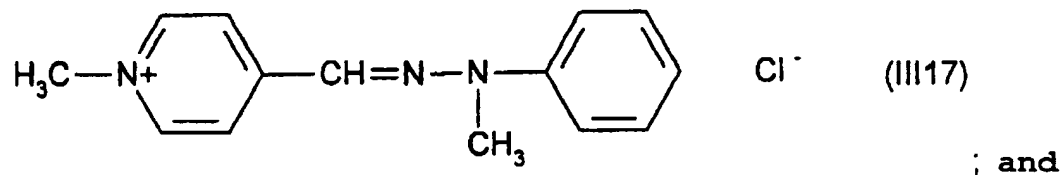
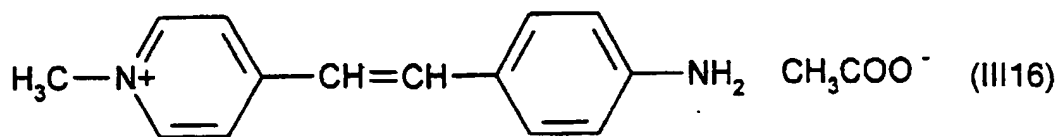


000020 50764260



668020-50761c.60





13

12

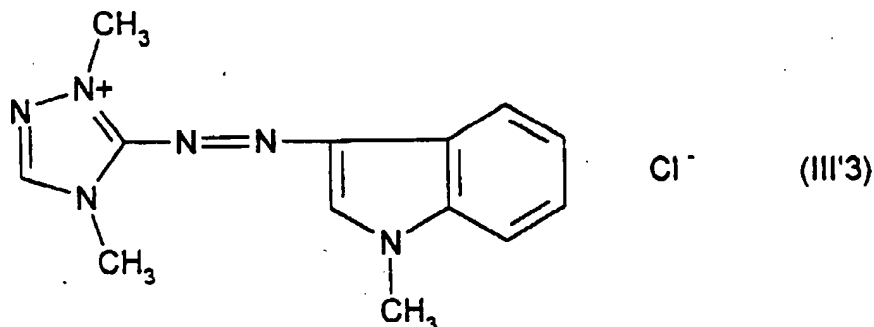
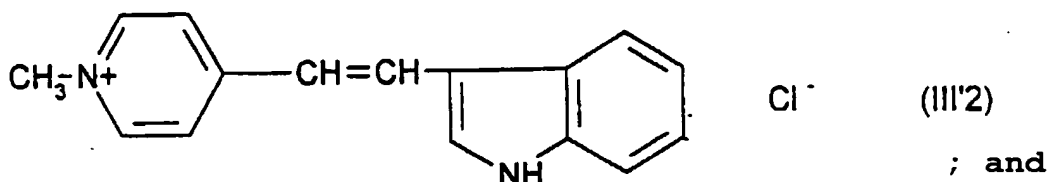
14. The composition according to Claim 13, wherein said at least one cationic direct dye of formula (III) is chosen from compounds of formulae (III4), (III5) and (III13).

~~15.~~

(III'3) below:



THE UNIVERSITY OF CHICAGO



¹⁵
16. The composition according to Claim 1, wherein said at least one cationic direct dye of formula (I), (II), (III) or (III') is present in an amount ranging from 0.001 to 10% by weight relative to the total weight of the composition.

¹⁶
¹⁵
17. The composition according to Claim ~~16~~, wherein said at least one cationic direct dye of formula (I), (II), (III) or (III') is present in an amount ranging from 0.005 to 5% by weight relative to the total weight of the composition.

¹⁷
18. The composition according to Claim ~~7~~, wherein said at least one thickening polymer is chosen from hydroxyalkylcelluloses.

¹⁸
¹⁷
19. The composition according to Claim ~~18~~, wherein said hydroxyalkylcelluloses are chosen from hydroxyethylcelluloses and hydroxypropylcelluloses.

¹⁹
20. The composition according to Claim ¹~~7~~, wherein said at least one thickening polymer is chosen from carboxyalkylcelluloses.

²⁰
~~21~~ The composition according to Claim ¹⁹~~20~~, wherein said carboxyalkylcelluloses are carboxymethylcelluloses.

²¹
22. The composition according to Claim 1, wherein said at least one thickening polymer is a nonionic guar gum modified with C₁-C₆ hydroxyalkyl groups.

²²
23. The composition according to Claim ²¹~~22~~, wherein said hydroxyalkyl groups are chosen from hydroxymethyl, hydroxyethyl, hydroxypropyl and hydroxybutyl groups.

²³
24. The composition according to Claim ²¹~~22~~, wherein said nonionic guar gum has a degree of hydroxyalkylation ranging from 0.4 to 1.2.

²⁴
25. The composition according to Claim 1, wherein said at least one thickening polymer is present in an amount ranging from 0.01 to 10% by weight relative to the total weight of the composition.

²⁵
26. The composition according to Claim ²⁴~~25~~, wherein said at least one thickening polymer is present in an amount ranging from 0.1 to 5% by weight relative to the total weight of the composition.

²⁶
27. The composition according to Claim 1, wherein said composition further comprises a support chosen from water and a mixture of water and at

00349105-070899
668028-50764260

least one organic solvent.

²⁷
28. The composition according to Claim 1, wherein said composition has a pH ranging from 2 to 11.

²⁸ ²⁷
29. The composition according to Claim ~~28~~, wherein said composition has a pH ranging from 5 to 10.

sub 27
30. The composition according to Claim 1, wherein said composition further comprises at least one additional direct dye.

³⁰ ²⁹
31. The composition according to Claim ~~30~~, wherein said at least one additional direct dye is chosen from nitrobenzene dyes, anthraquinone dyes, naphthaquinone dyes, triarylmethane dyes, xanthene dyes and azo dyes.

³¹
32. The composition according to Claim 1, wherein said composition further comprises at least one oxidation base chosen from para-phenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases.

³² ³¹
33. The composition according to Claim ~~32~~, wherein said at least one oxidation base is present in an amount ranging from 0.0005 to 12% by weight relative to the total weight of the dye composition.

³³ ³²
34. The composition according to Claim ~~33~~, wherein said at least one oxidation base is present in an amount ranging from 0.005 to 6% by weight relative to the total weight of the dye composition.

34
35

31

The composition according to Claim ~~32~~, wherein said composition further comprises at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols and heterocyclic couplers.

35

34

The composition according to Claim ~~35~~, wherein said at least one coupler is present in an amount ranging from 0.0001 to 10% by weight relative to the total weight of the dye composition.

36

35

The composition according to Claim ~~36~~, wherein said at least one coupler is present in an amount ranging from 0.005 to 5% by weight relative to the total weight of the dye composition.

37

31

The composition according to Claim ~~32~~, wherein said composition further comprises at least one oxidizing agent.

38

37

The composition according to Claim ~~38~~, wherein said at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts and enzymes.

39

38

The composition according to Claim ~~39~~, wherein said persalts are chosen from perborates and persulphates.

40

38

The composition according to Claim ~~39~~, wherein said ~~enzymes~~ ^{enzymes} are chosen from peroxidases, lactases, and two-electron oxidoreductases.

41

The composition according to Claim 1, wherein said composition is present in an amount sufficient for lightening dyeing direct dyeing.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

⁴²
~~43.~~ The composition according to Claim 1, wherein said composition further comprises at least one oxidizing agent.

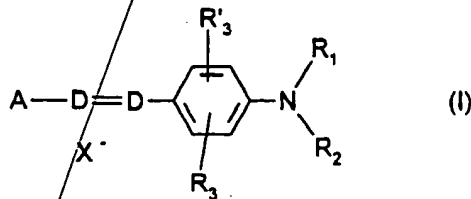
⁴³
~~44.~~ The composition according to Claim 1, wherein said composition is in a form chosen from a liquid, a shampoo, a cream and a gel.

45. A process for dyeing keratin fibers, comprising applying a composition for the oxidation dyeing of keratin fibers to said keratin fibers and developing for a period of time sufficient to achieve the desired coloration, wherein said composition comprises:

(i) at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, and

(ii) at least one thickening polymer;

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a

hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals; or

R₁ and R₂ form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C₁-C₄ alkyl radicals;

R₃ and R'₃, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄ alkoxy radicals and acetyloxy radicals,

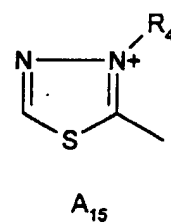
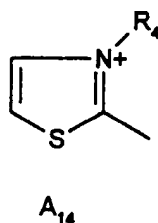
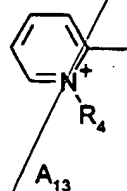
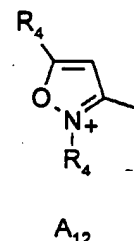
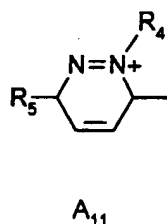
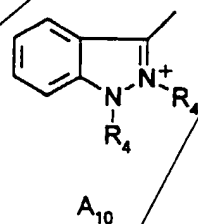
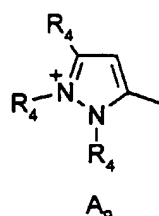
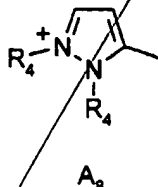
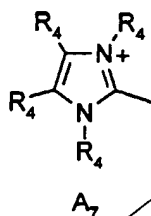
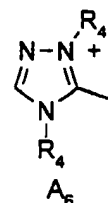
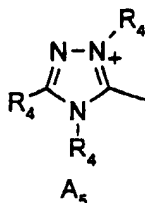
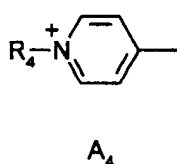
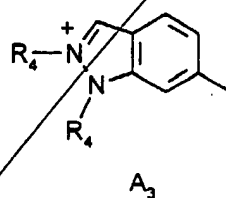
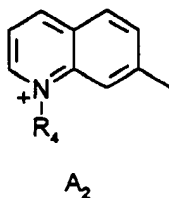
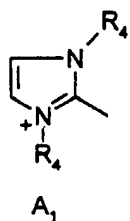
X⁻ is chosen from anions,

A is chosen from structures A₁ to A₁₉ below:

668820-5016152
Sub A4 cat

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

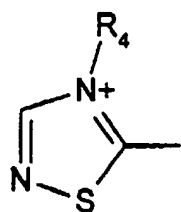


05725.0441-00000

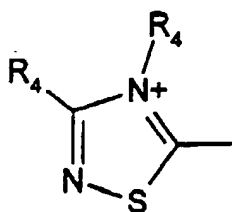
Handwritten signature

LAW OFFICES

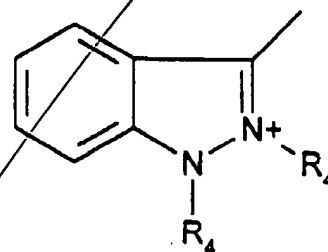
FINNEGAN, HENDERSON,
 FARABOW, GARRETT,
 & DUNNER, L.L.P.
 1300 I STREET, N. W.
 WASHINGTON, D. C. 20005
 202-408-4000



A₁₆

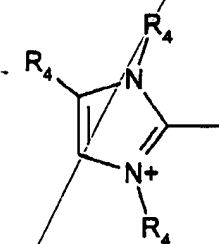


A₁₇



A₁₈

and



A₁₉

in which:

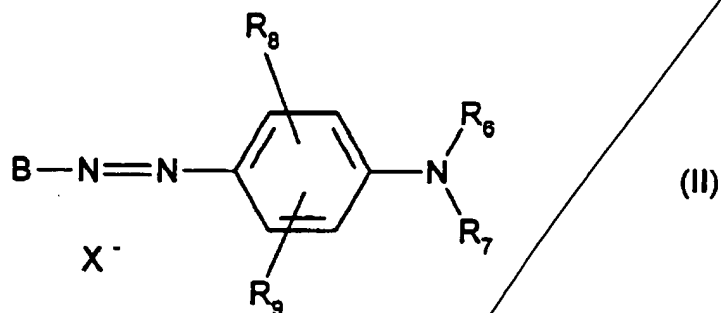
R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

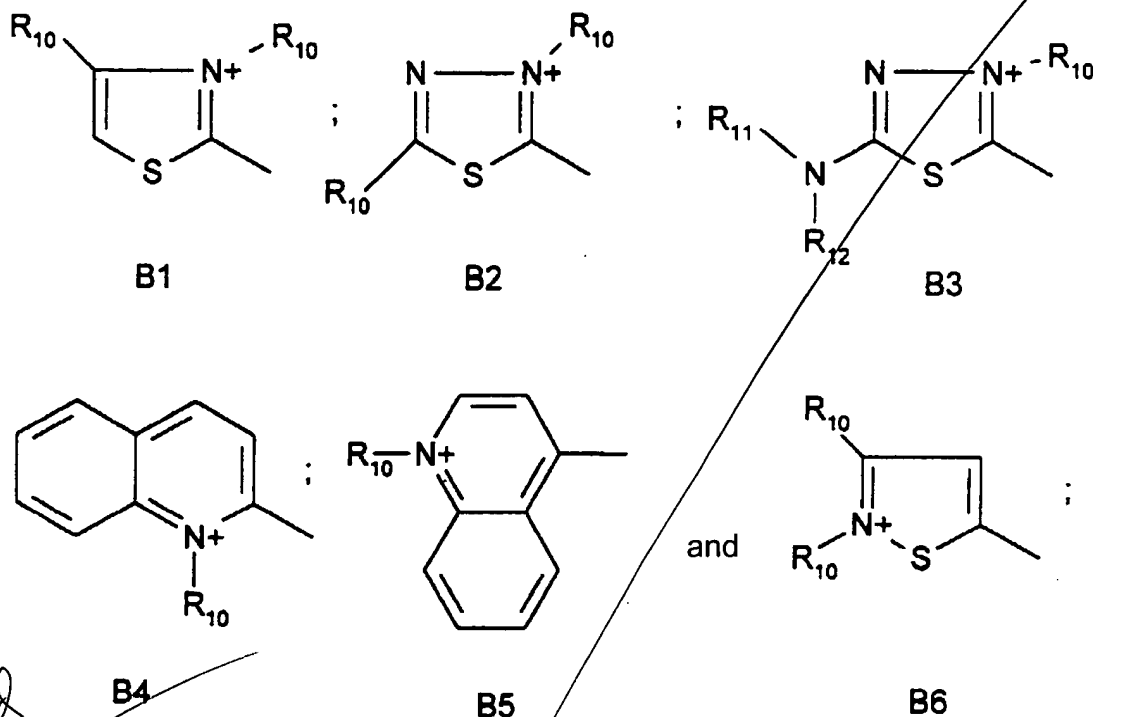
R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:



in which:

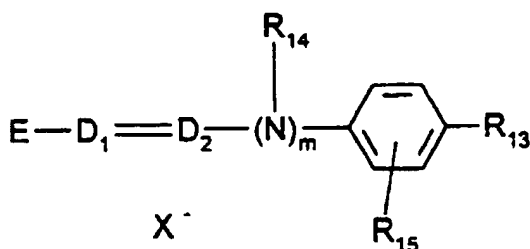
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

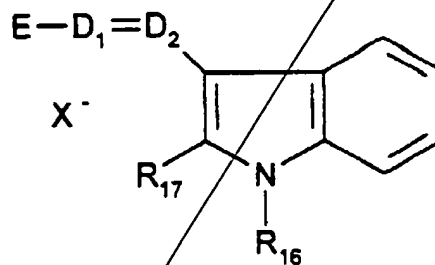
(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:

668020-50164260

pub
A4 cont 8



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, $\text{C}_1\text{-C}_4$ alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, $\text{C}_1\text{-C}_4$ alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one to radical chosen from $\text{C}_1\text{-C}_4$ alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and $\text{C}_1\text{-C}_4$ alkyl radicals,

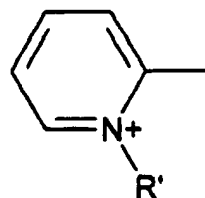
D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a $-\text{CH}$ group,

m is 0 or 1,

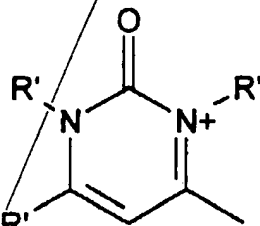
wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

pub 24 conts

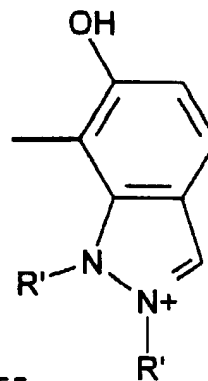
E is chosen from structures E_1 to E_8 below:



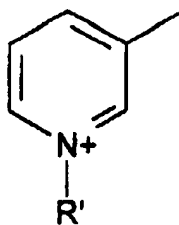
E2



E4

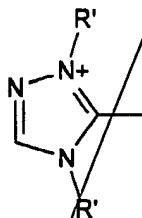


E5



E7

and

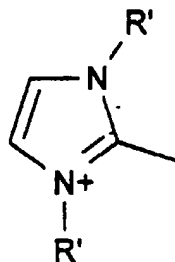


E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be

further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

and

- and wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

45

46. The process according to Claim 45, wherein said process further

comprises rinsing said fibers, then drying said fibers.

66802015076E80

46

47.

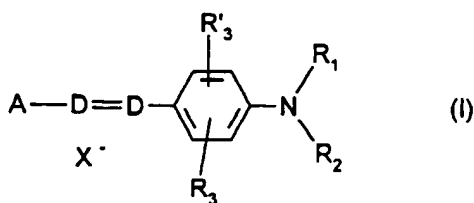
44

45

The process according to Claim 45, wherein said process further comprises rinsing said fibers, washing said fibers with shampoo, a second rinsing of said fibers and drying of said fibers.

48. A process for dyeing keratin fibers, comprising separately storing a first composition, separately storing a second composition, thereafter mixing said first and second compositions, applying said mixture to said fibers, and developing for a period of time sufficient to achieve ^athe desired coloration, wherein said first composition comprises at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, at least one thickening polymer and at least one oxidation base,

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

668040-5076160

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

R_1 and R_2 , which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C_1 - C_4 alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and - NH_2 radicals; or

R_1 and R_2 form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C_1 - C_4 alkyl radicals;

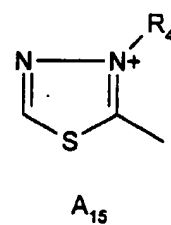
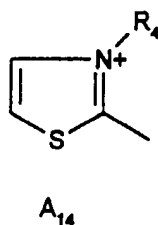
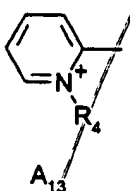
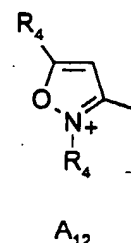
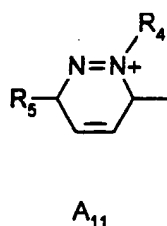
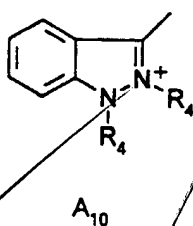
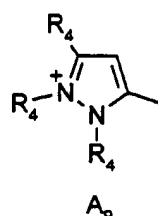
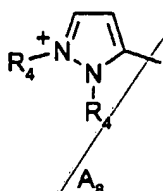
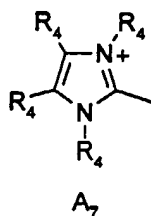
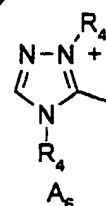
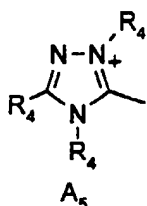
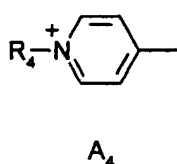
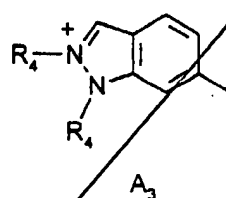
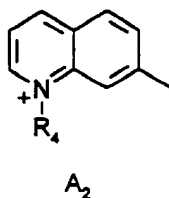
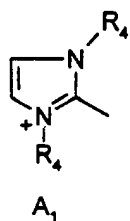
R_3 and R'_3 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and acetyloxy radicals,

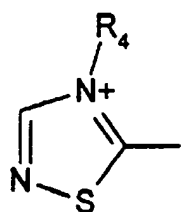
X^- is chosen from anions,

A is chosen from structures A_1 to A_{19} below:

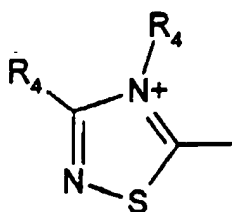
00349105-50761560

Handwritten signature/initials

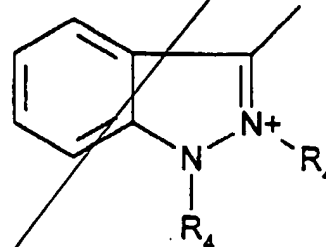




A₁₆

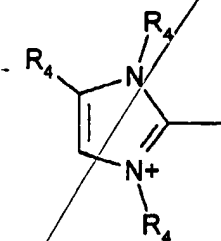


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

R₅ is chosen from C₁-C₄ alkoxy radicals, and

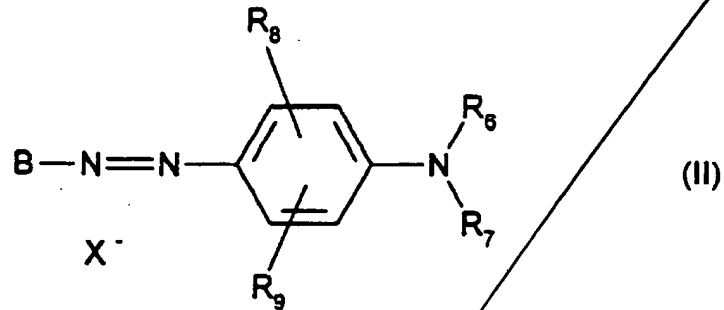
wherein when D represents -CH, when A represents A₄ or A₁₃ and when

R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

003495 50764E60

compounds of formula:



in which:

R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

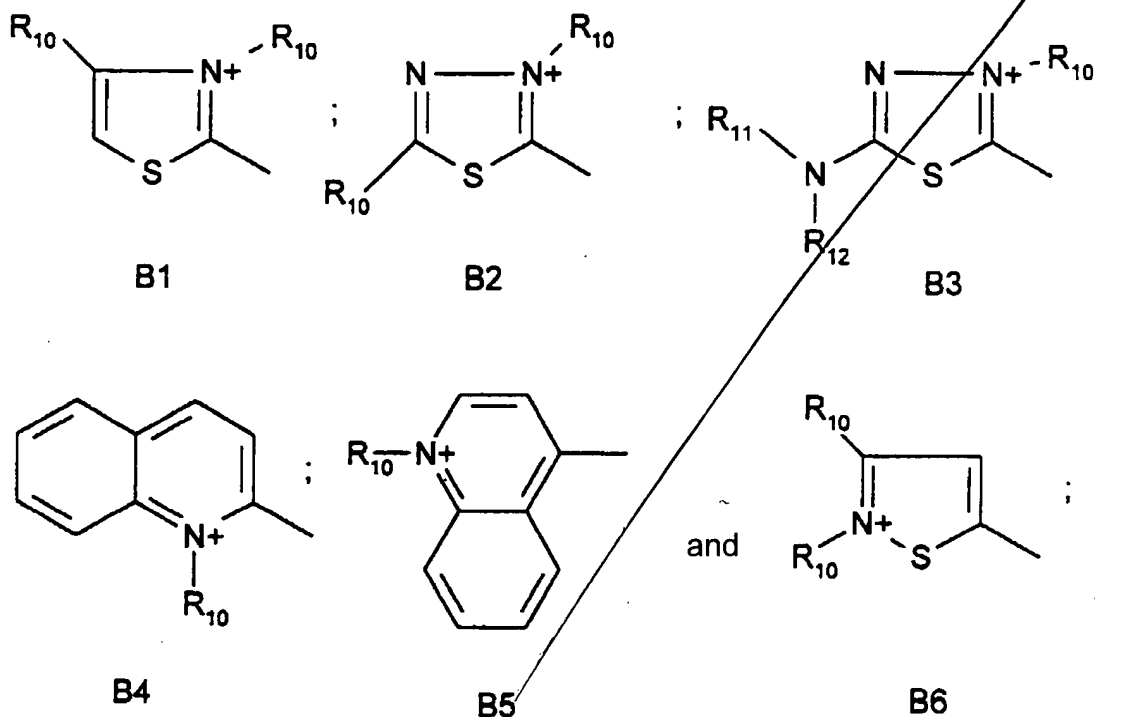
R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



in which:

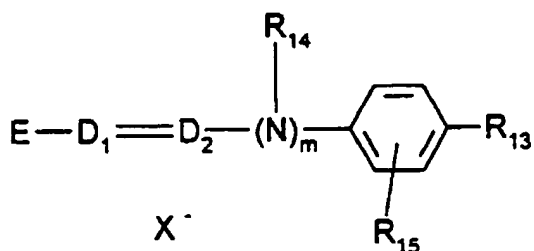
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

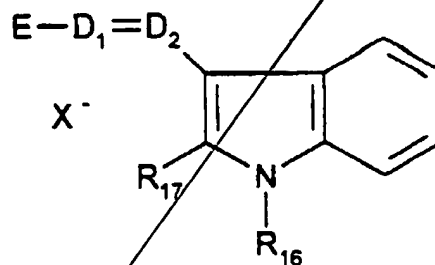
(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:

05725.0441-00000

Pub
C3



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

m is 0 or 1,

wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

00002050704660

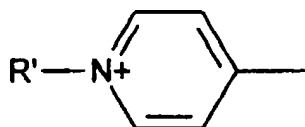
LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

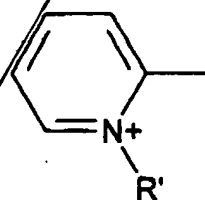
-CH group and m is 0,

X⁻ is chosen from anions,

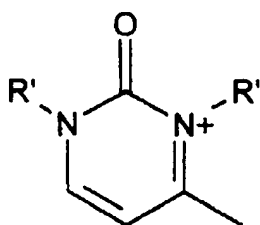
E is chosen from structures E₁ to E₈ below:



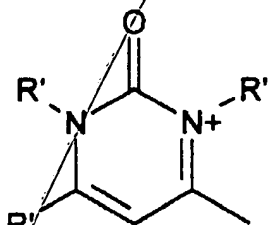
E1



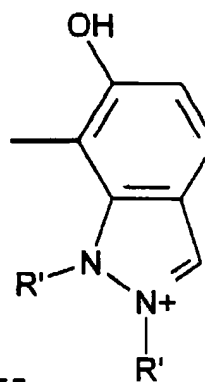
E2



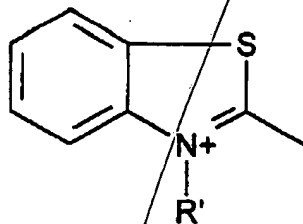
E3



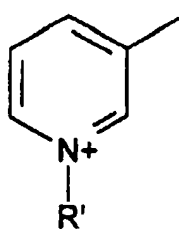
E4



E5



E6

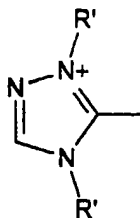


E7

668040-50764E60

Ref 23

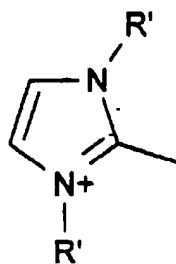
and



E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

- and wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit; and

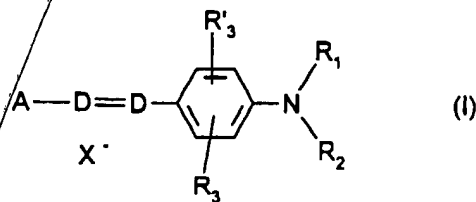
- wherein said second composition comprises at least one oxidizing agent.

49. A process for dyeing keratin fibers, comprising separately storing a first composition,

665020 "SOT 6th 60"

separately storing a second composition,
thereafter mixing said first and second compositions,
applying said mixture to said fibers, and
developing for a period of time sufficient to achieve ^athe desired coloration,
- wherein said first composition comprises at least one oxidation base, and
at least one cationic direct dye chosen from compounds of formulae (I), (II), (III)
and (III') below:

(a) wherein said compounds of formula (I) are chosen from
compounds of formula:



in which.

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a
hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can
optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals;

or

R₁ and R₂ form, with each other or with a carbon atom of the benzene ring of

665020-5076660

formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C₁-C₄ alkyl radicals;

R₃ and R'₃, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄ alkoxy radicals and acetyloxy radicals,

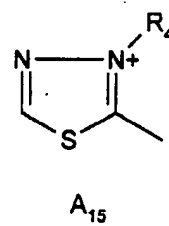
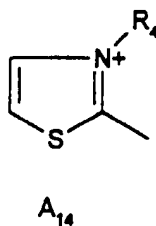
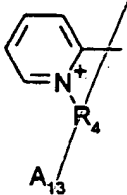
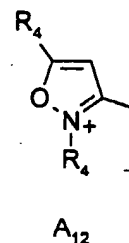
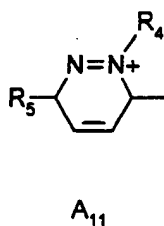
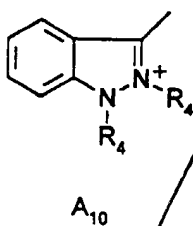
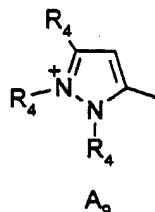
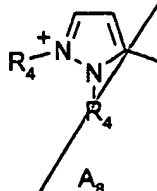
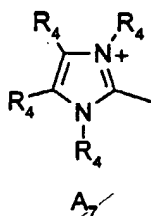
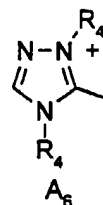
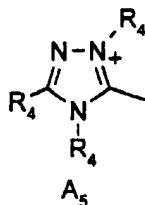
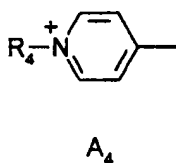
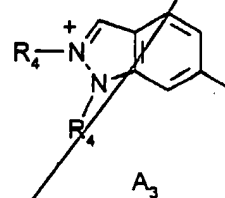
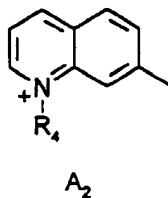
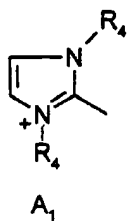
X⁻ is chosen from anions.

A is chosen from structures A₁ to A₁₉ below:

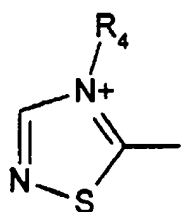
668020" SDT 674660

LAW OFFICES

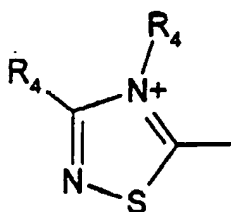
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



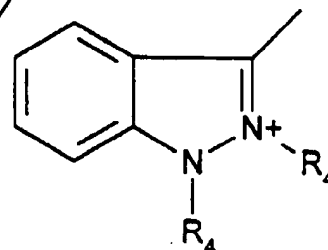
666010-50164660



A₁₆

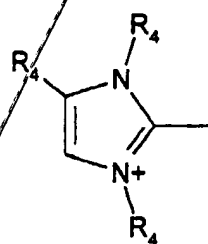


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

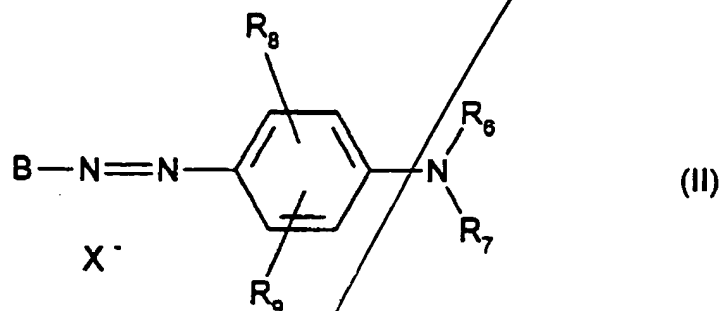
R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

compounds of formula:



in which:

R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

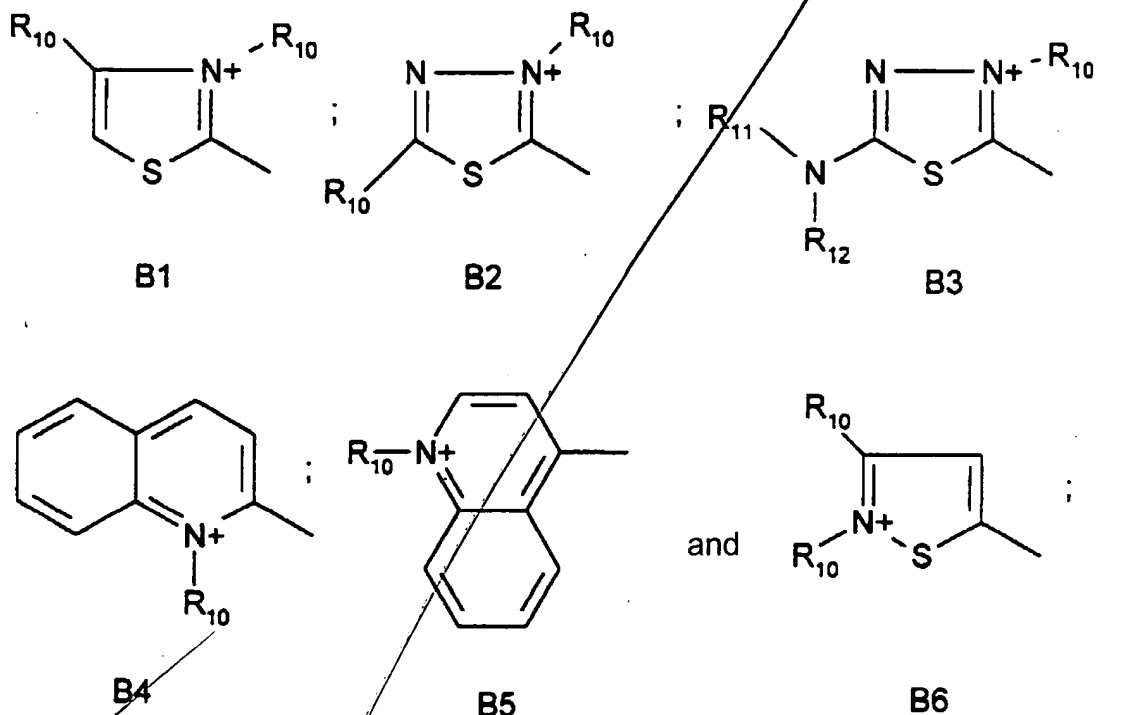
R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



in which:

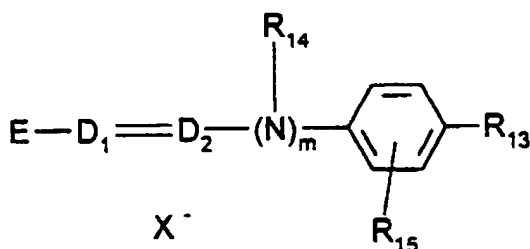
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

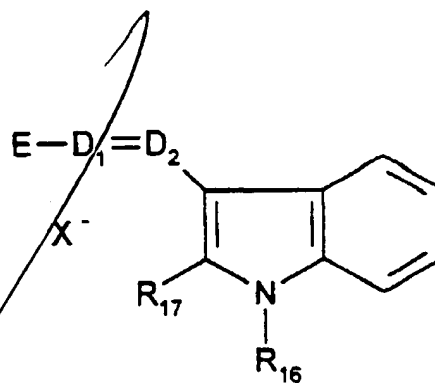
(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:

05725.0441-00000

*Sub
C3*



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a $-CH$ group,

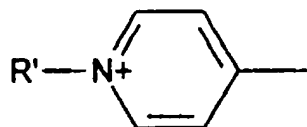
m is 0 or 1,

wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

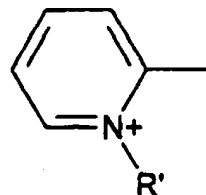
-CH group and m is 0,

X⁻ is chosen from anions,

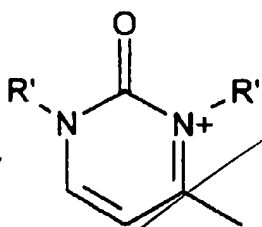
E is chosen from structures E₁ to E₈ below:



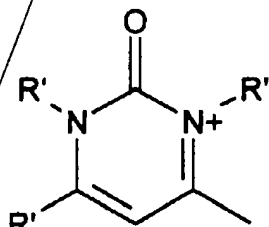
E1



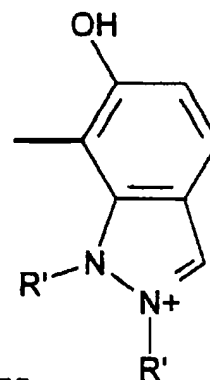
E2



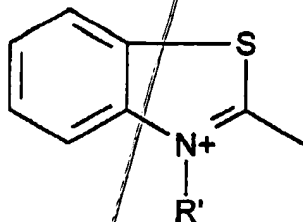
E3



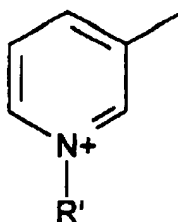
E4



E5



E6

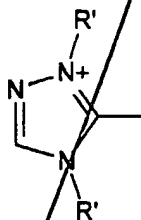


E7

05725.0441-00000

Pub

and

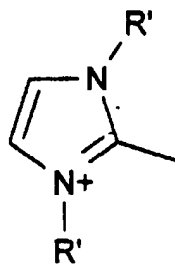


E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be further chosen from structure E9 below:

E9



in which R' is chosen from C₁-C₄ alkyl radicals;

and

- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,

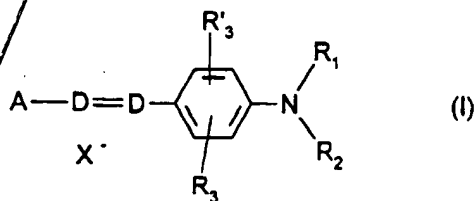
- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

66501-507-01E60

Sub
E3

50. A process for dyeing keratin fibers, comprising
separately storing a first composition,
separately storing a second composition,
thereafter mixing said first and second compositions,
applying said mixture to said fibers, and
developing for a period of time sufficient to achieve ^athe desired coloration,
wherein said first composition comprises at least one cationic direct dye
chosen from compounds of formulae (I), (II), (III) and (III') below and at least one
thickening polymer:

(a) wherein said compounds of formula (I) are chosen from
compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a
hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can
optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals;

or

R_1 and R_2 form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C_1 - C_4 alkyl radicals;

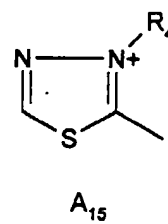
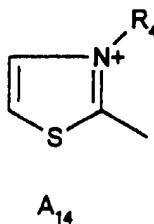
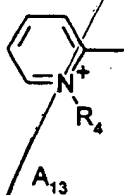
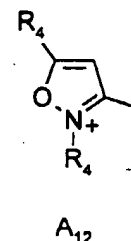
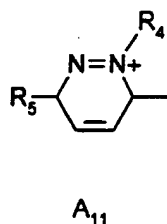
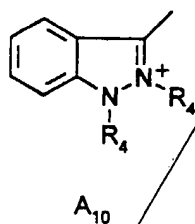
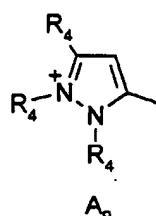
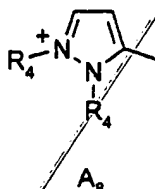
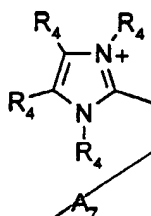
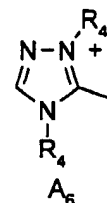
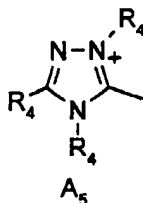
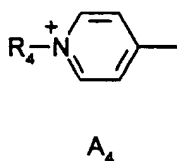
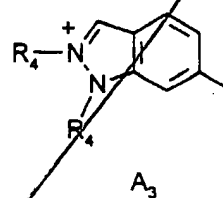
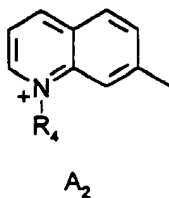
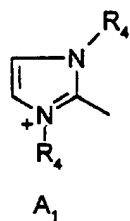
R_3 and R'_3 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and acetyloxy radicals,

X^- is chosen from anions,

A is chosen from structures A_1 to A_{19} below:

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

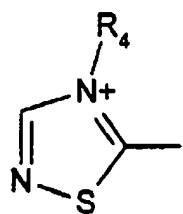


Pub C3

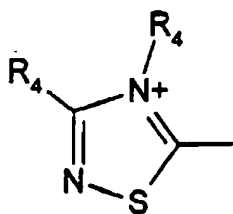
Pub C3

LAW OFFICES

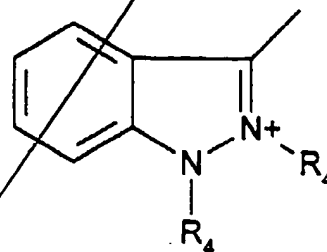
FINNEGAN, HENDERSON,
 FARABOW, GARRETT,
 & DUNNER, L.L.P.
 1300 I STREET, N. W.
 WASHINGTON, D. C. 20005
 202-408-4000



A₁₆

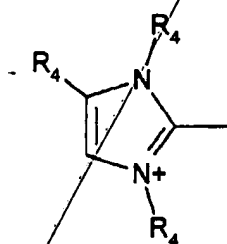


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

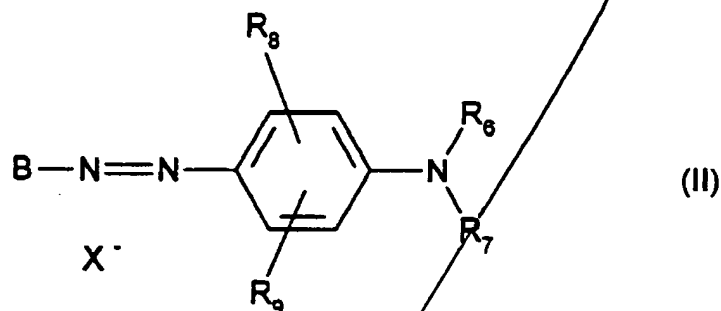
R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

660020 10764660

sub
C3

compounds of formula:



in which:

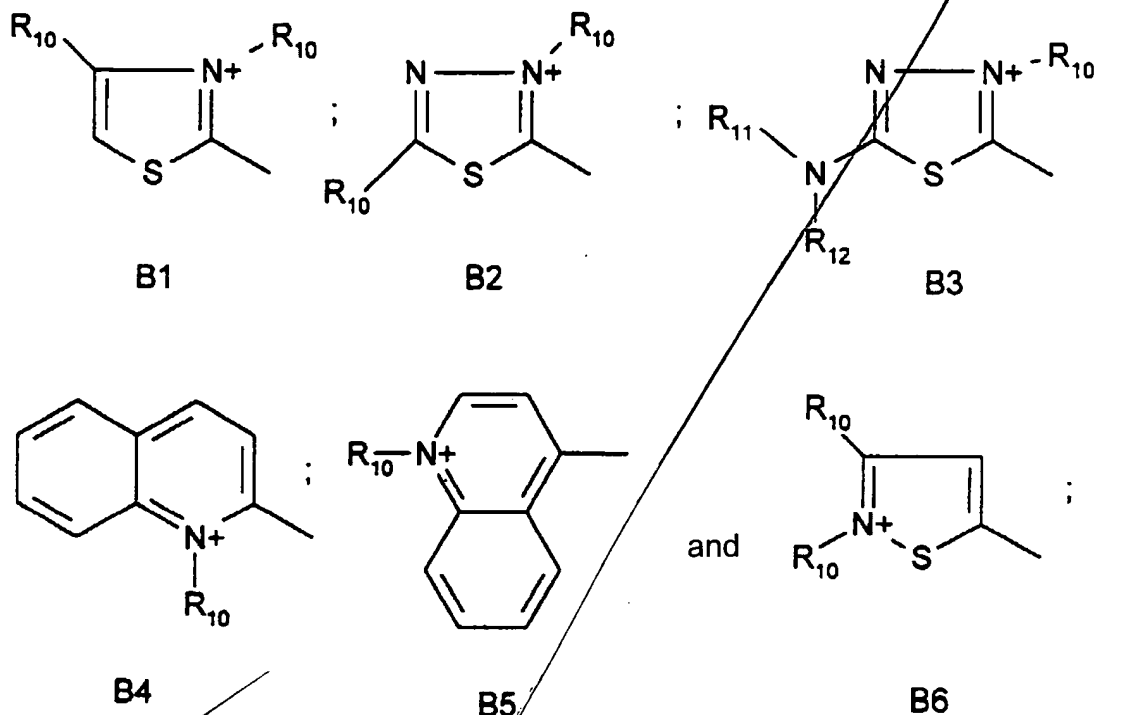
R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:



in which:

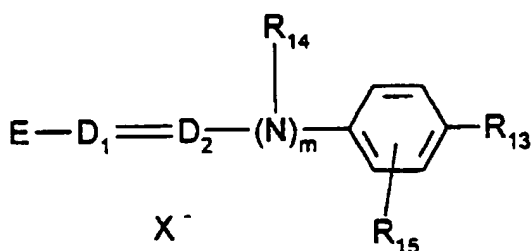
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

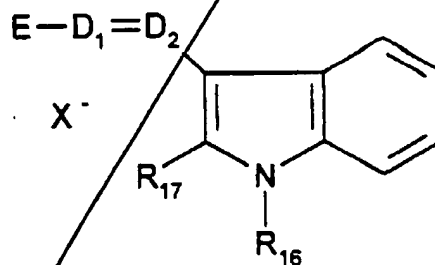
(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:

668040-0441-00000

Sub
B3



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a $-CH$ group,

m is 0 or 1,

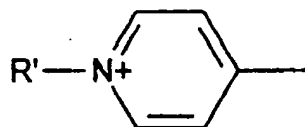
wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

05725/0441-00000

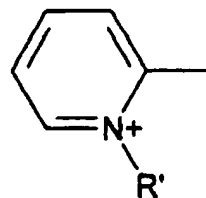
-CH group and m is 0,

X⁻ is chosen from anions,

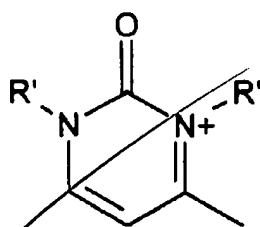
E is chosen from structures E₁ to E₈ below:



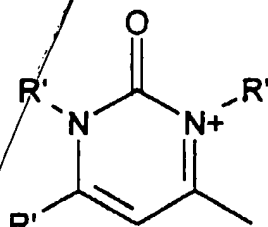
E1



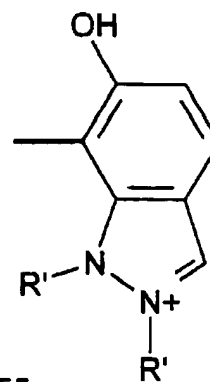
E2



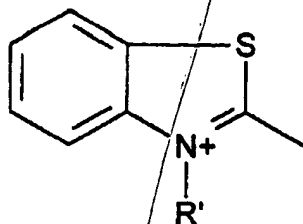
E3



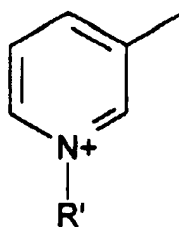
E4



E5



E6

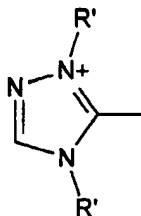


E7

RECEIVED 11/11/00

pub 11/11/00

and

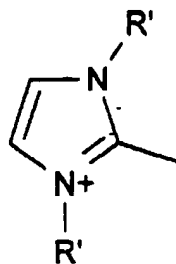


E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be

further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit; and
- wherein said second composition comprises at least one oxidizing agent.

51. A process for dyeing keratin fibers, comprising

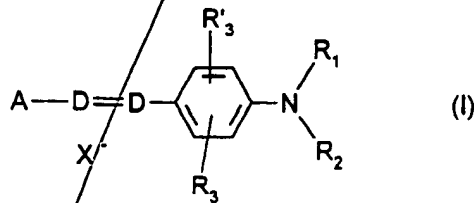
separately storing a first composition, -

05725.0441-00000

sub C3

separately storing a second composition,
thereafter mixing said first and second compositions,
applying said mixture to said fibers, and
developing for a period of time sufficient to achieve the desired coloration,
- wherein said first composition comprises at least one cationic direct dye
chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from
compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a
hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can
optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals;
or

R₁ and R₂ form, with each other or with a carbon atom of the benzene ring of
formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen

660020 507 64 E 60
pub
C₂

and nitrogen, which can be substituted with at least one radical chosen from C₁-C₄ alkyl radicals;

R₃ and R'₃, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄ alkoxy radicals and acetyloxy radicals,

X⁻ is chosen from anions,

A is chosen from structures A₁ to A₁₉ below:

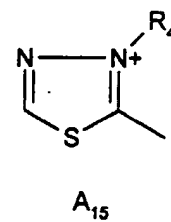
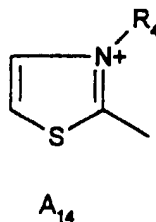
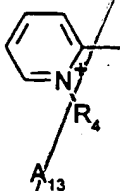
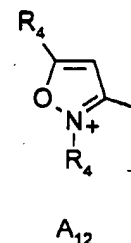
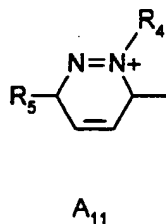
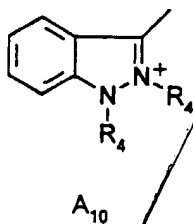
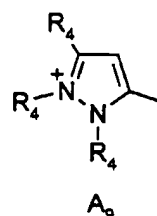
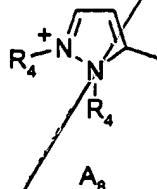
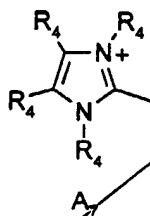
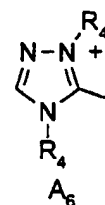
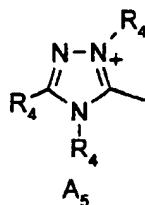
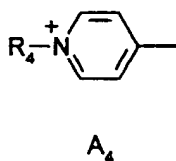
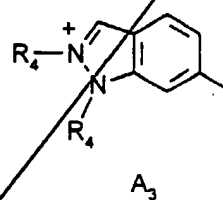
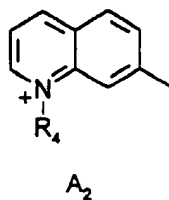
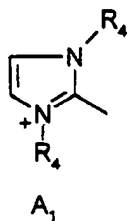
660020-50761660

Sub
C₃

✓

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

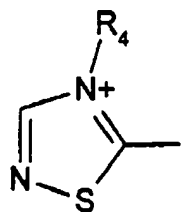


666020-99464660

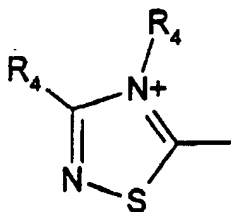
pub 13

LAW OFFICES

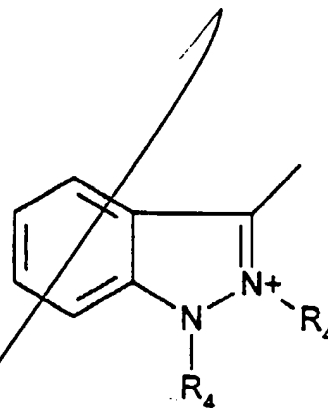
FINNEGAN, HENDERSON,
 FARABOW, GARRETT,
 & DUNNER, L.L.P.
 1300 I STREET, N. W.
 WASHINGTON, D. C. 20005
 202-408-4000



A₁₆

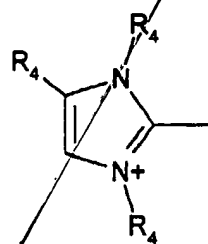


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

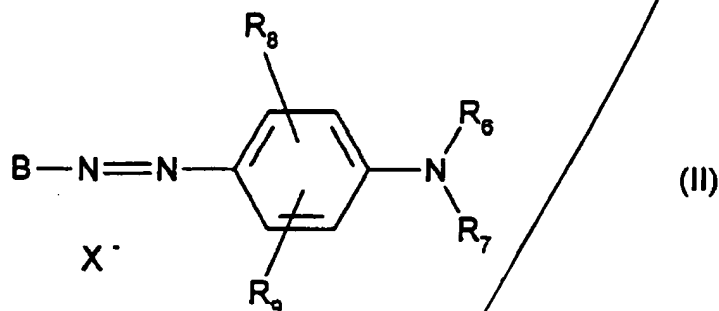
R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

compounds of formula:



in which:

R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

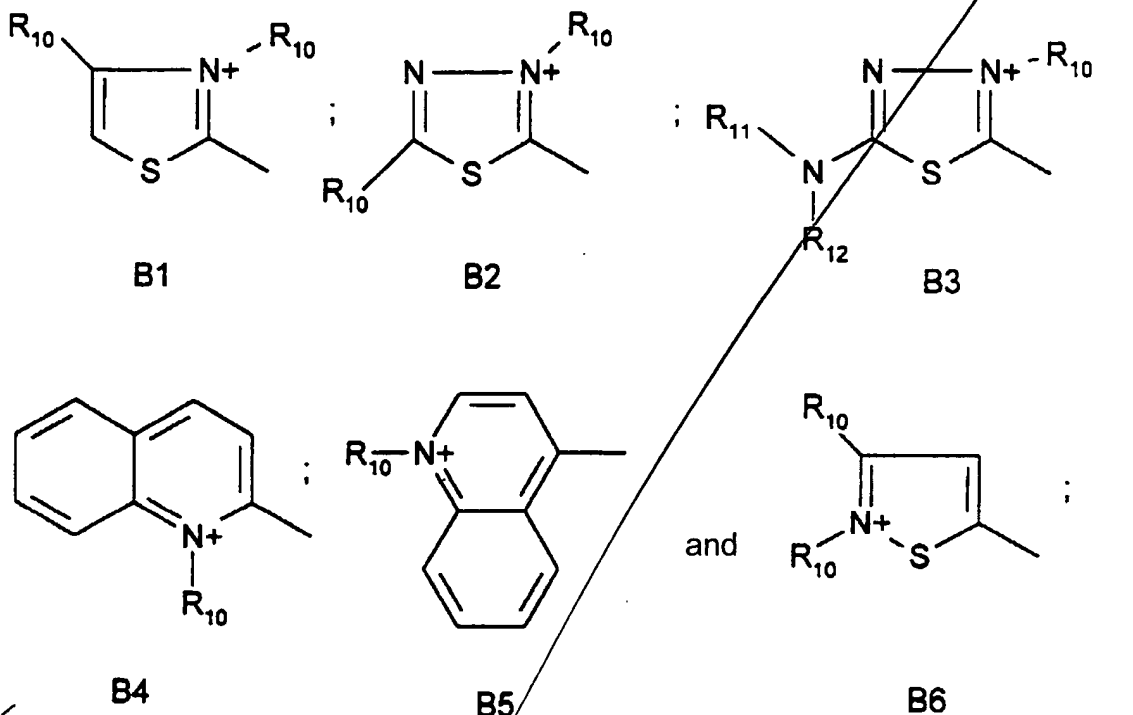
R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

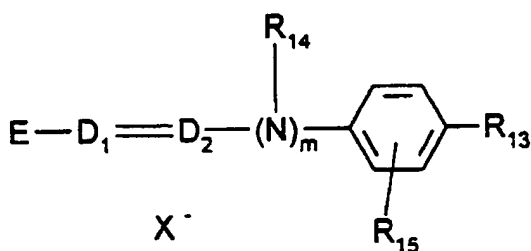


in which:

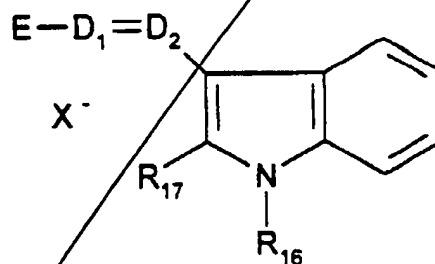
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a $-CH$ group,

m is 0 or 1,

wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

660020-50764660

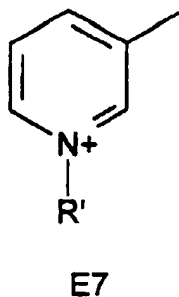
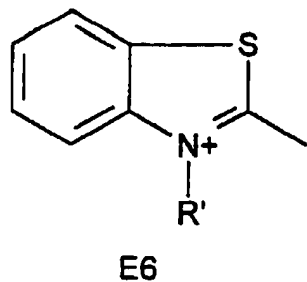
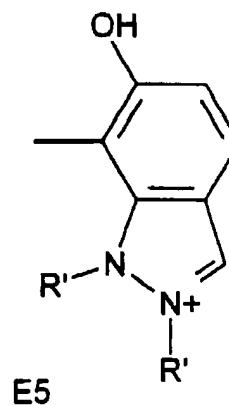
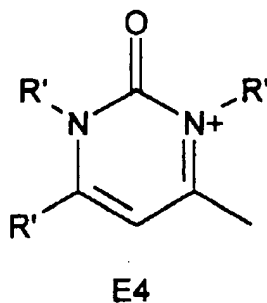
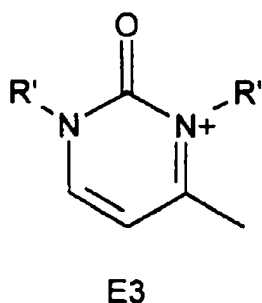
Sub
C3

00000000000000000000000000000000

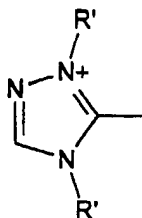
E2

[R']N1=CC=CC=C1

E1



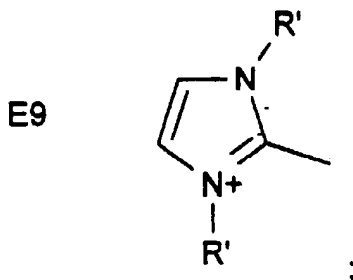
and



E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,
- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

52. A multi-compartment dyeing kit, comprising at least two separate

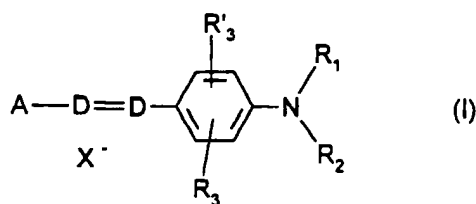
LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

compartments, wherein a first compartment contains a first composition and a second compartment contains a second composition, -

- wherein said first composition comprises at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below, at least one thickening polymer and at least one oxidation base:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R_1 and R_2 , which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C_1 - C_4 alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and - NH_2 radicals;

or

R_1 and R_2 form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from

05725.0441-00000

C₁-C₄ alkyl radicals;

R₃ and R'₃, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄ alkoxy radicals and acetyloxy radicals,

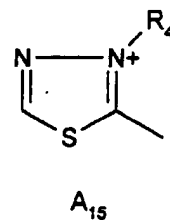
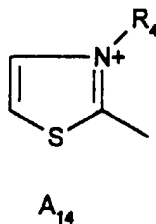
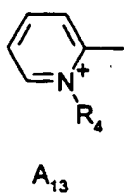
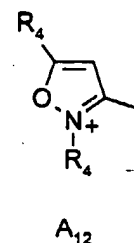
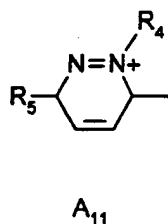
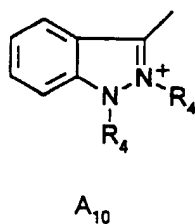
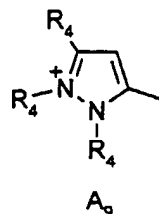
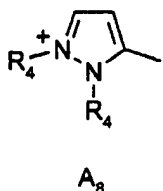
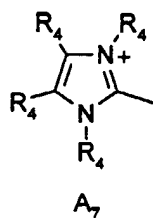
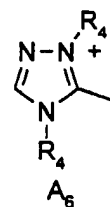
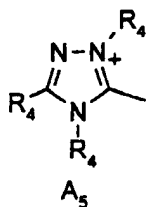
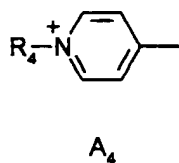
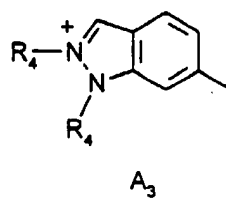
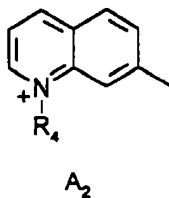
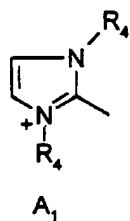
X⁻ is chosen from anions,

A is chosen from structures A₁ to A₁₉ below:

665020-5076HE60

LAW OFFICES

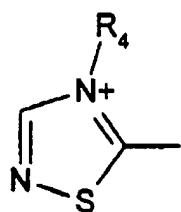
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



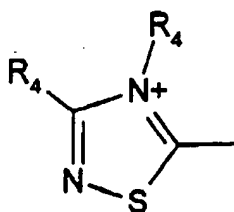
00319105-00000

LAW OFFICES

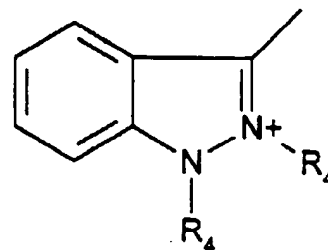
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



A₁₆

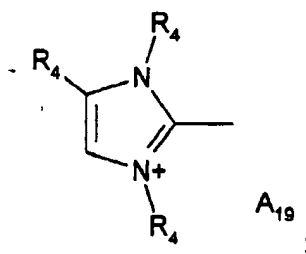


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

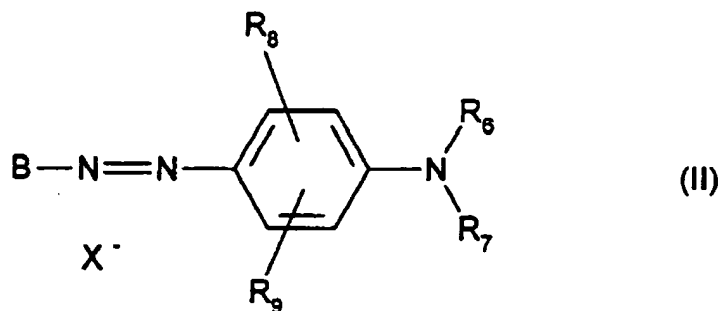
R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

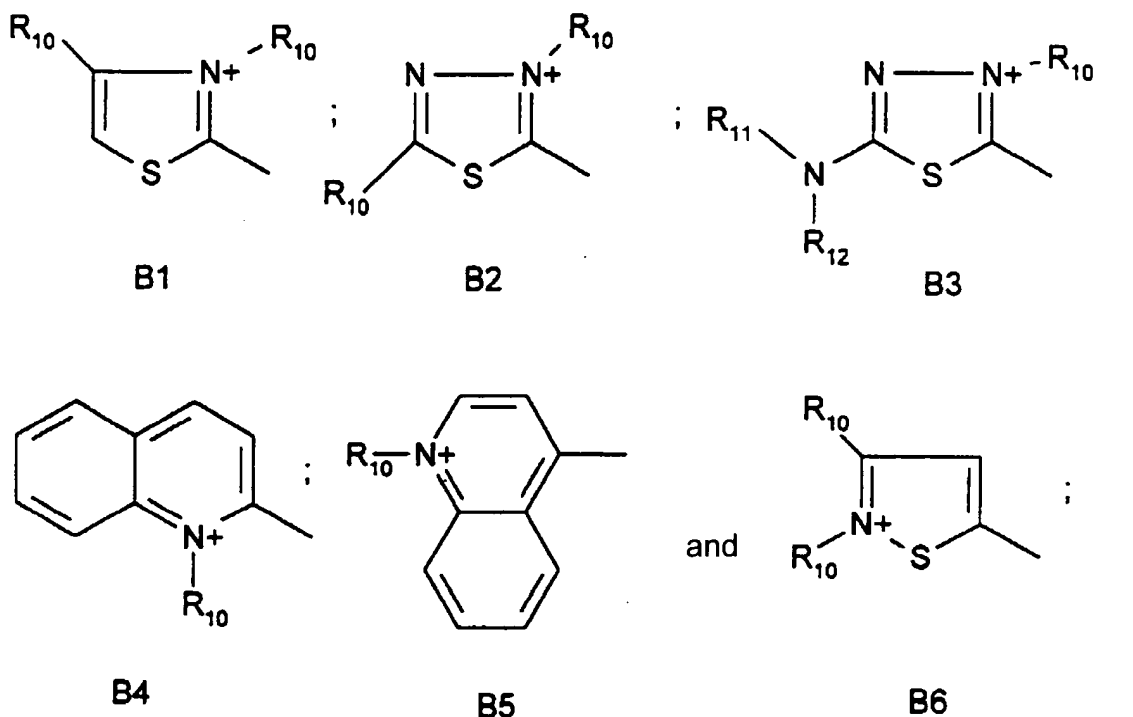
R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

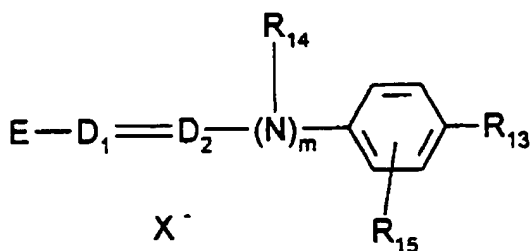


in which:

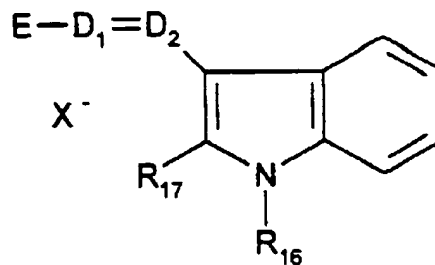
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

m is 0 or 1,

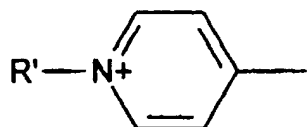
wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

669029-5076E50

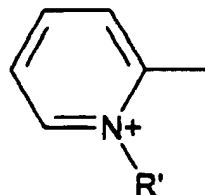
-CH group and m is 0,

X⁻ is chosen from anions,

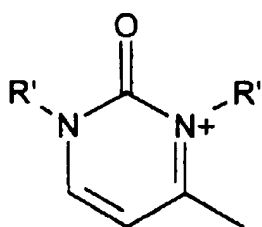
E is chosen from structures E₁ to E₈ below:



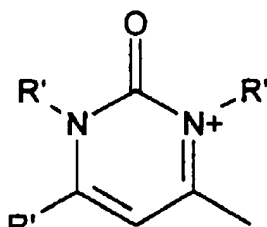
E1



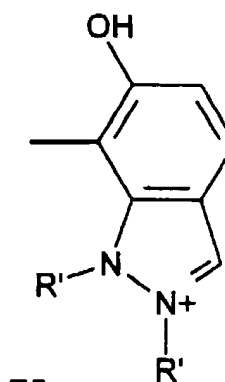
E2



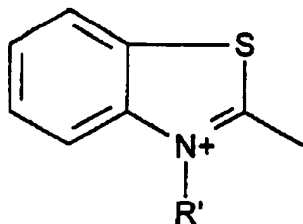
E3



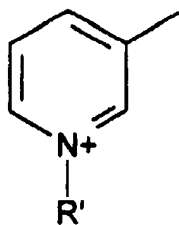
E4



E5

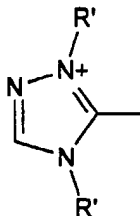


E6



E7

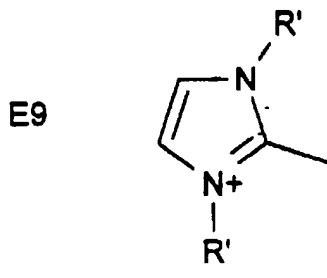
and



E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

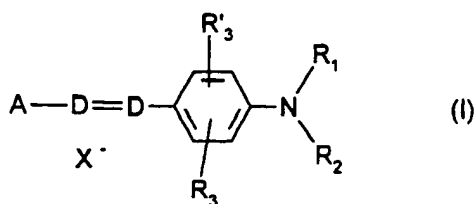
- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit; and
- wherein said second composition comprises at least one oxidizing agent.

53. A multi-compartment dyeing kit, comprising at least two separate

compartments, wherein a first compartment contains a first composition and a second compartment contains a second composition,

- wherein said first composition comprises at least one oxidation base and at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals;

or

R₁ and R₂ form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from

05725.0441-00000

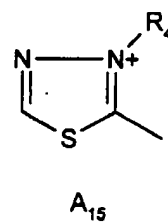
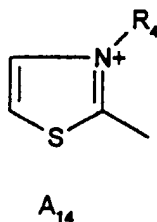
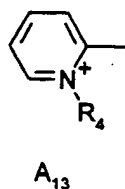
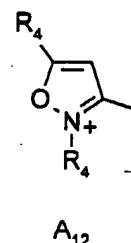
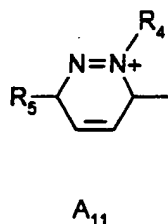
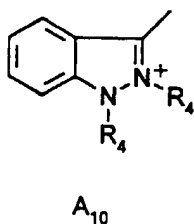
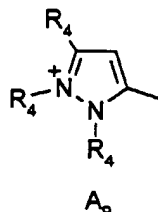
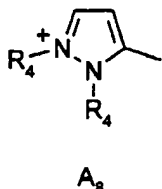
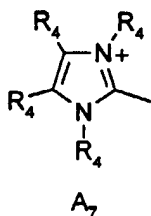
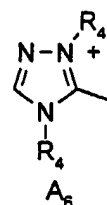
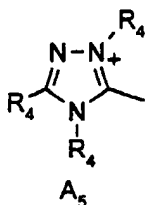
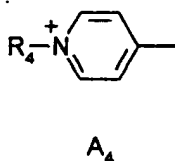
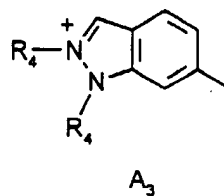
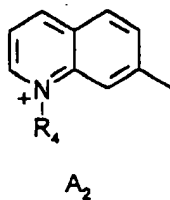
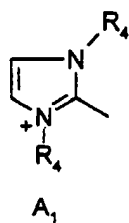
C₁-C₄ alkyl radicals;

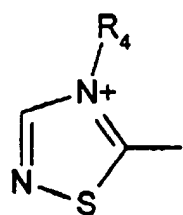
R₃ and R'₃, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄ alkoxy radicals and acetyloxy radicals,

X⁻ is chosen from anions,

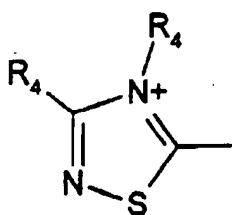
A is chosen from structures A₁ to A₁₉ below:

665040" 50767E60

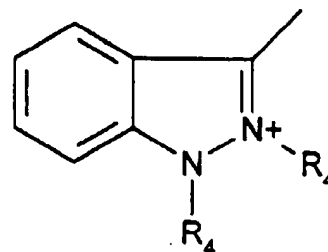




A₁₆

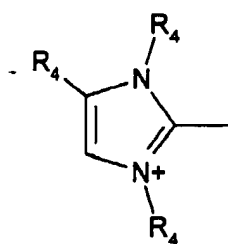


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

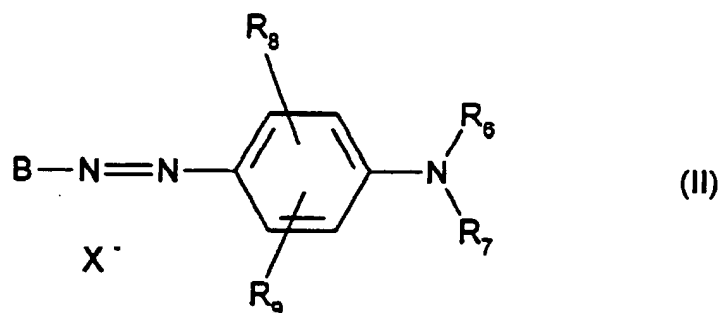
R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

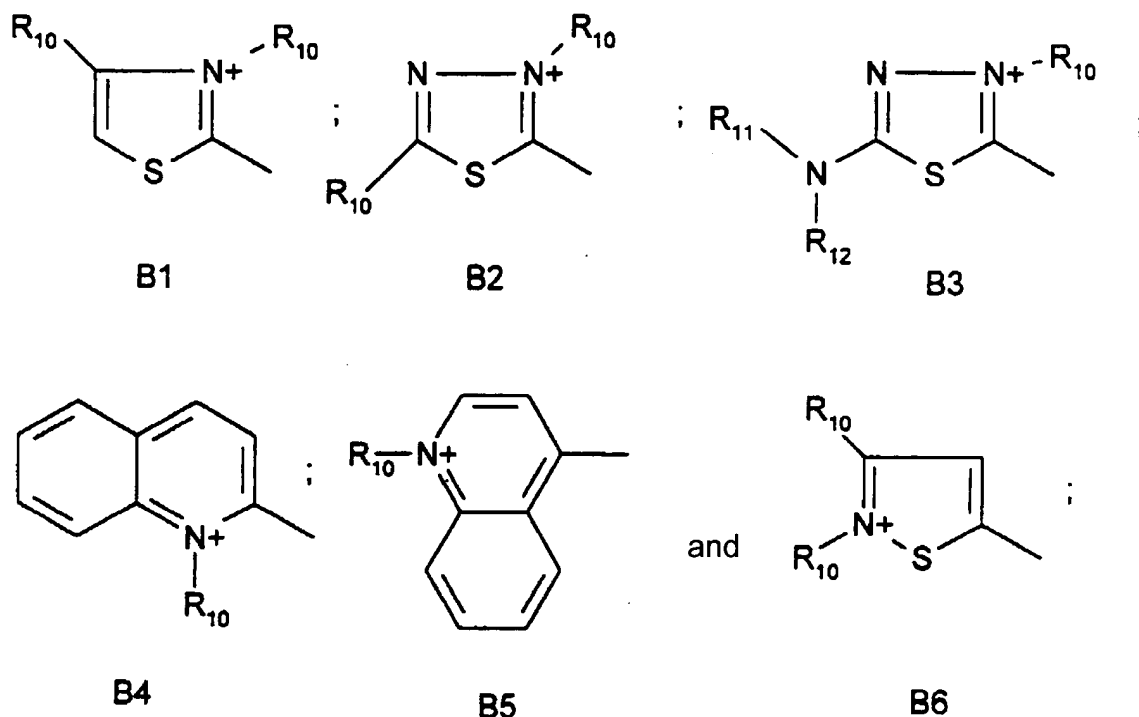
R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

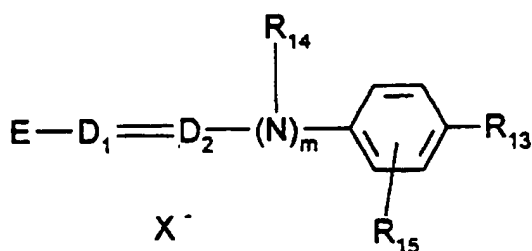


in which:

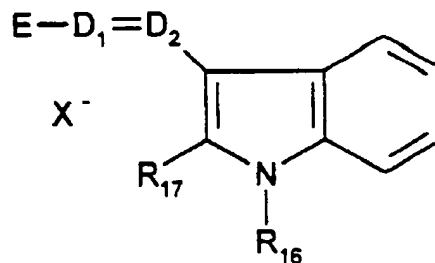
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one to radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

m is 0 or 1,

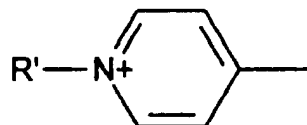
wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

608020-5076460

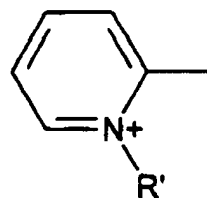
-CH group and m is 0,

X⁻ is chosen from anions,

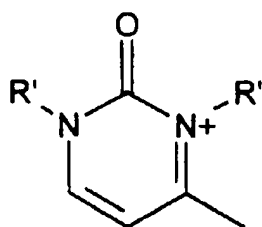
E is chosen from structures E₁ to E₈ below:



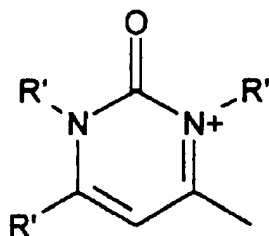
E1



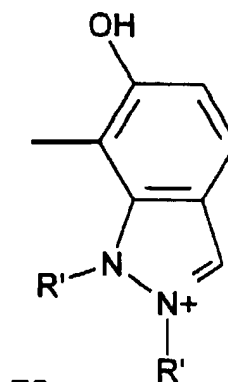
E2



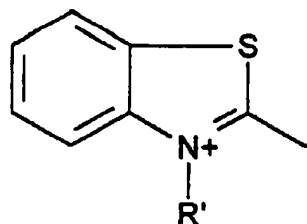
E3



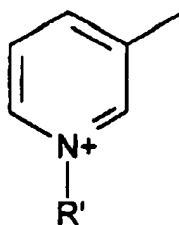
E4



E5

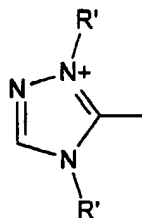


E6



E7

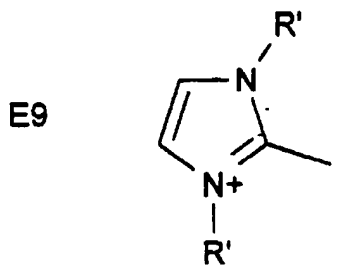
and



E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,

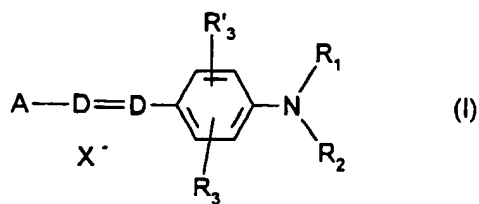
- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

54. A multi-compartment dyeing kit, comprising at least two separate

compartments, wherein a first compartment contains a first composition and a second compartment contains a second composition,

- wherein said first composition comprises at least one thickening polymer and at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals;

or

R₁ and R₂ form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from

665020 50764E60

C₁-C₄ alkyl radicals;

R₃ and R'₃, which may be identical or different, are chosen from a hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄ alkoxy radicals and acetyloxy radicals,

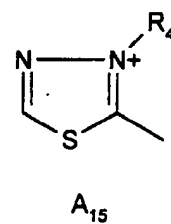
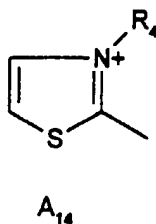
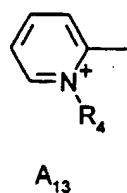
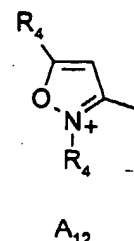
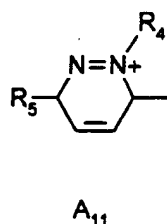
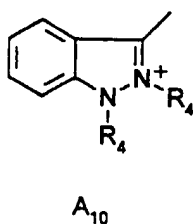
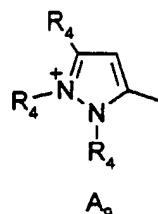
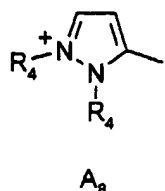
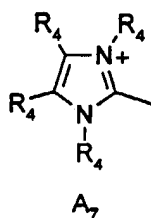
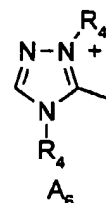
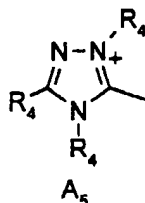
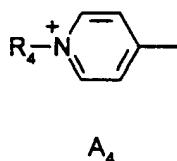
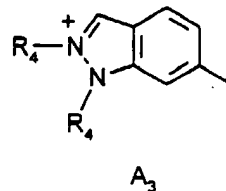
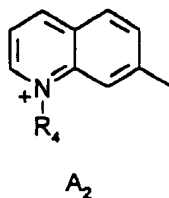
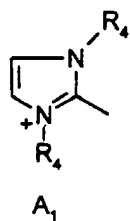
X⁻ is chosen from anions,

A is chosen from structures A₁ to A₁₉ below:

668020" 50764E60

LAW OFFICES

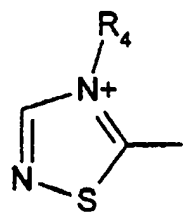
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



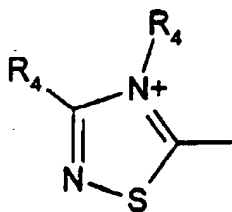
05725.0441-00000

LAW OFFICES

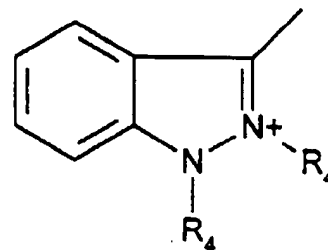
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



A₁₆

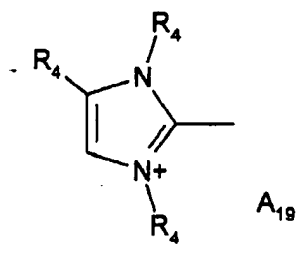


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

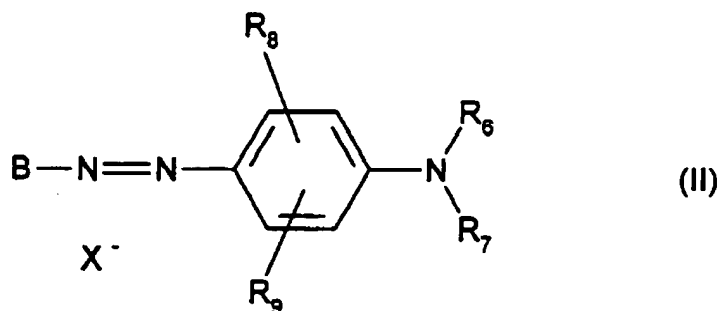
R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

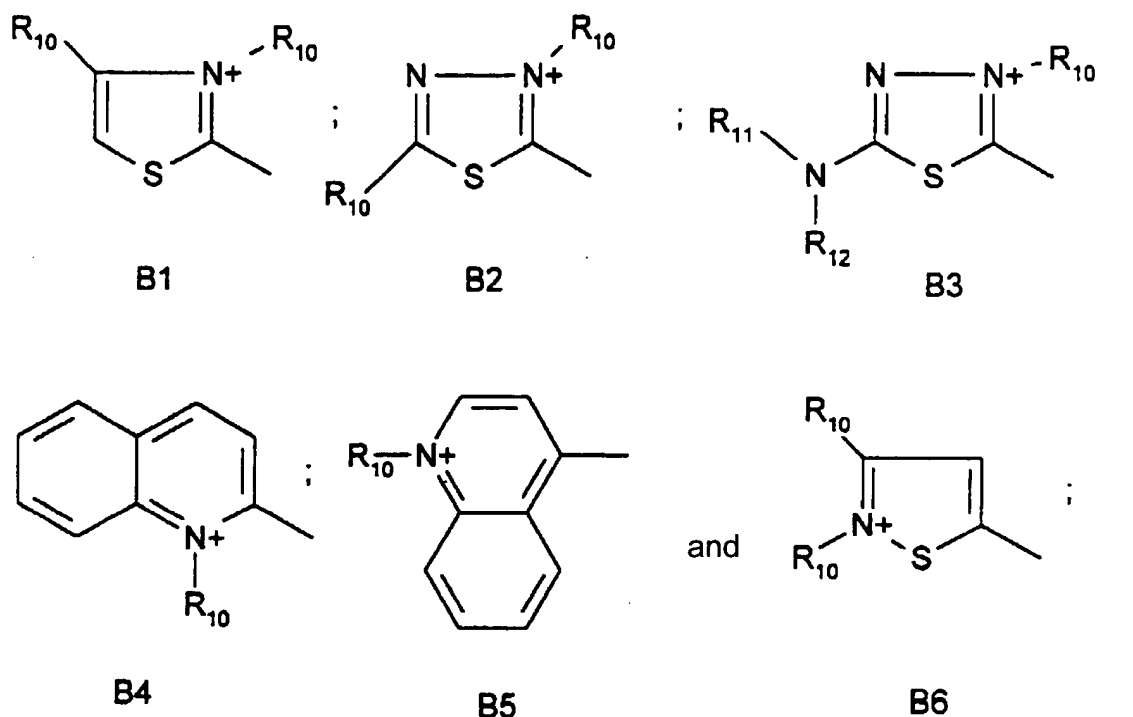
R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

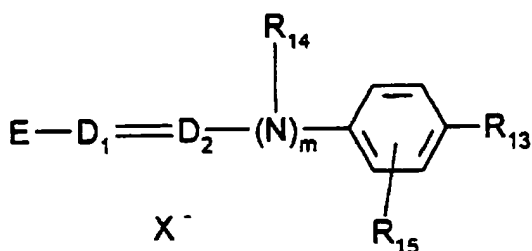


in which:

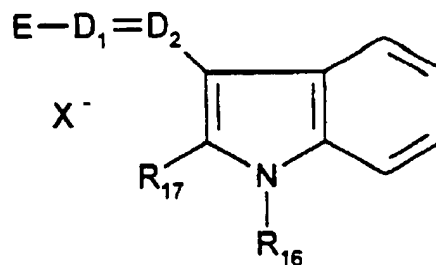
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

m is 0 or 1,

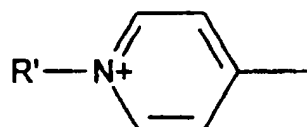
wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

05725.0441-00000

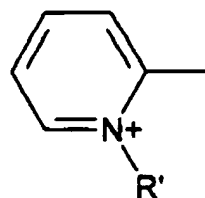
-CH group and m is 0,

X⁻ is chosen from anions,

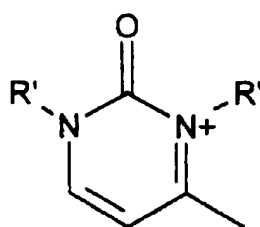
E is chosen from structures E₁ to E₈ below:



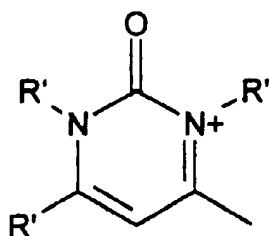
E1



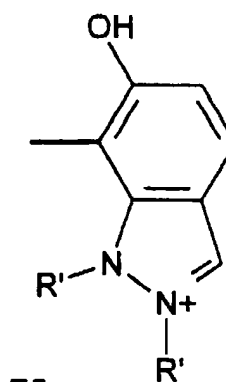
E2



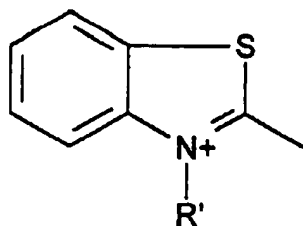
E3



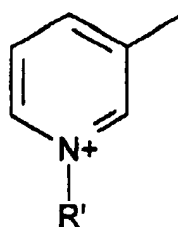
E4



E5

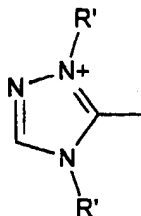


E6



E7

and

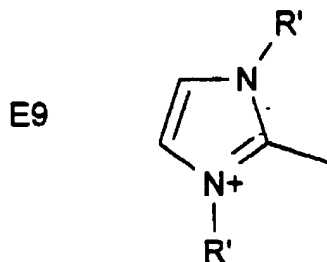


E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be

further chosen from structure E9 below:



E9

in which R' is chosen from C₁-C₄ alkyl radicals;

-wherein said at least one thickening polymer is chosen from polymers

comprising at least one sugar unit; and

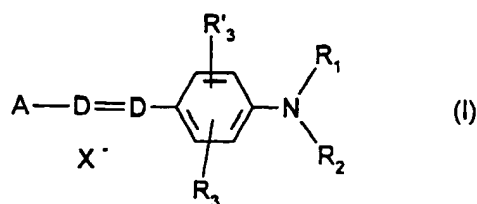
- wherein said second composition comprises at least one oxidizing agent.

55. A multi-compartment dyeing kit, comprising at least two separate compartments, wherein a first compartment contains a first composition and a

second compartment contains a second composition,

- wherein said first composition comprises at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') below:

(a) wherein said compounds of formula (I) are chosen from compounds of formula:



in which:

D is chosen from a nitrogen atom and a -CH group,

R₁ and R₂, which may be identical or different, are chosen from a hydrogen atom; a 4'-aminophenyl radical; and C₁-C₄ alkyl radicals which can optionally be substituted with a radical chosen from -CN, -OH and -NH₂ radicals;

or

R₁ and R₂ form, with each other or with a carbon atom of the benzene ring of formula (I), a heterocycle optionally containing a heteroatom chosen from oxygen and nitrogen, which can be substituted with at least one radical chosen from C₁-C₄ alkyl radicals;

R₃ and R'₃, which may be identical or different, are chosen from a

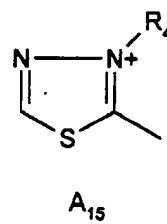
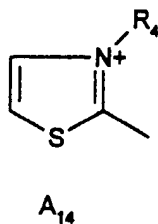
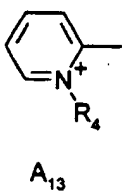
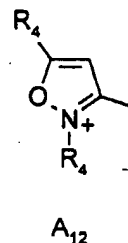
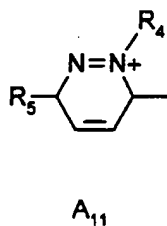
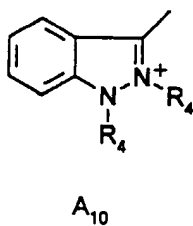
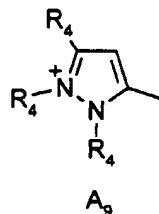
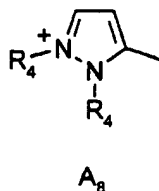
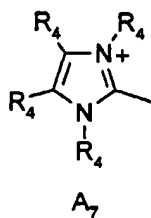
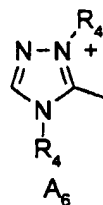
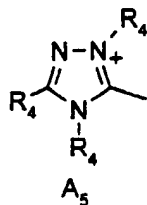
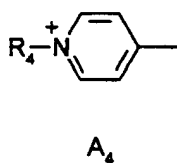
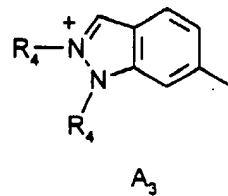
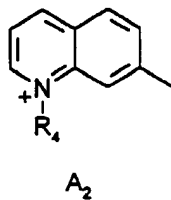
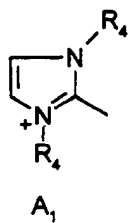
05725.0441-00000

hydrogen atom, halogen atoms, a cyano radical, C₁-C₄ alkyl radicals, C₁-C₄
alkoxy radicals and acetyloxy radicals,

X⁻ is chosen from anions,

A is chosen from structures A₁ to A₁₉ below:

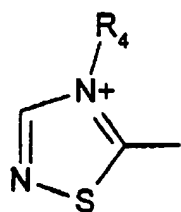
05725.0441-00000



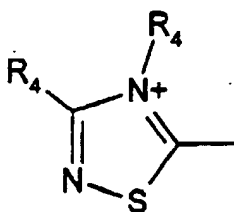
000000-50764500

LAW OFFICES

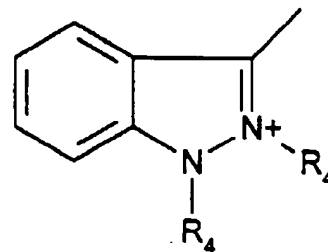
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000



A₁₆

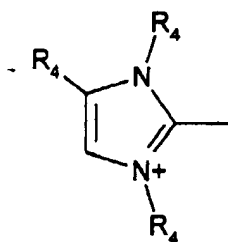


A₁₇



A₁₈

and



A₁₉

in which:

R₄ is chosen from C₁-C₄ alkyl radicals which can be substituted with a hydroxyl radical, and

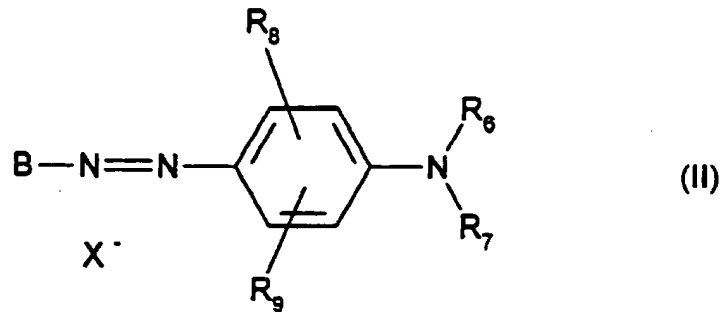
R₅ is chosen from C₁-C₄ alkoxy radicals, and

wherein when D represents -CH, when A represents A₄ or A₁₃ and when

R₃ is not an alkoxy radical, R₁ and R₂ are not both a hydrogen atom;

(b) wherein said compounds of formula (II) are chosen from

compounds of formula:



in which:

R_6 is chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

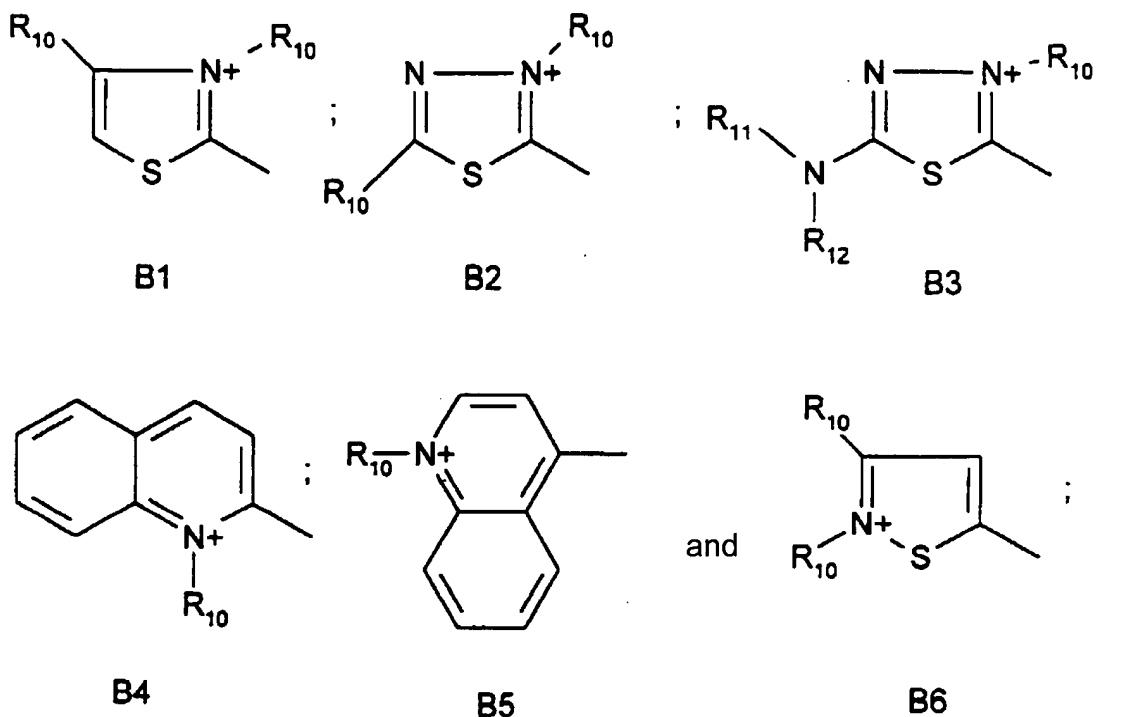
R_7 is chosen from a hydrogen atom, alkyl radicals which can be substituted with a species chosen from a -CN radical and an amino group, and a 4'-aminophenyl radical, or forms, with R_6 , a heterocycle optionally comprising at least one heteroatom chosen from oxygen and nitrogen, which can be substituted with C_1 - C_4 alkyl radicals,

R_8 and R_9 , which may be identical or different, are chosen from a hydrogen atom, halogen atoms, C_1 - C_4 alkyl radicals, C_1 - C_4 alkoxy radicals and a -CN radical,

X^- is chosen from anions,

B is chosen from structures B_1 to B_6 below:

000020-50767660

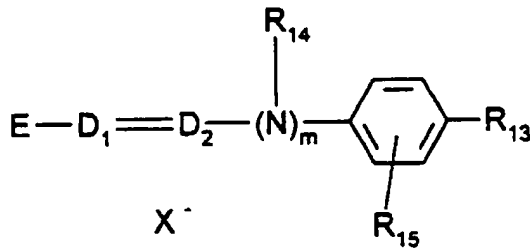


in which:

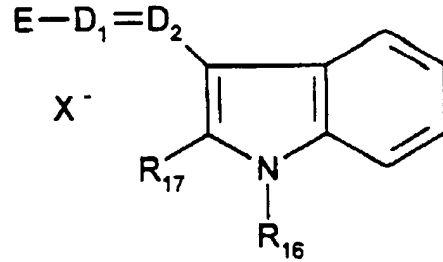
R_{10} is chosen from C_1 - C_4 alkyl radicals, and

R_{11} and R_{12} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals;

(c) wherein said compounds of formulae (III) and (III') are chosen from compounds of formulae:



(III)



(III')

in which:

R_{13} is chosen from a hydrogen atom, C_1 - C_4 alkoxy radicals, halogen atoms and an amino radical,

R_{14} is chosen from a hydrogen atom, C_1 - C_4 alkyl radicals or forms, with a carbon atom of the benzene ring, a heterocycle optionally containing an oxygen heteroatom and/or substituted with at least one radical chosen from C_1 - C_4 alkyl radicals,

R_{15} is chosen from a hydrogen atom and halogen atoms,

R_{16} and R_{17} , which may be identical or different, are chosen from a hydrogen atom and C_1 - C_4 alkyl radicals,

D_1 and D_2 , which may be identical or different, are chosen from a nitrogen atom and a -CH group,

m is 0 or 1,

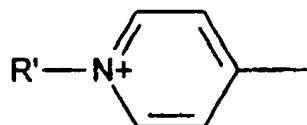
wherein when R_{13} is an unsubstituted amino group, D_1 and D_2 are both a

000020-50761260

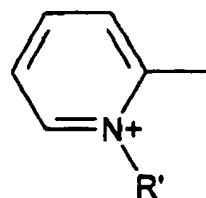
-CH group and m is 0,

X⁻ is chosen from anions,

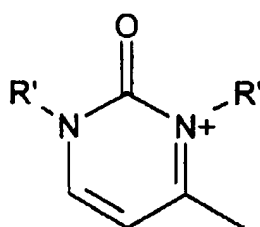
E is chosen from structures E₁ to E₈ below:



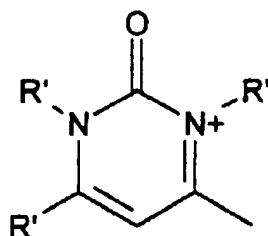
E1



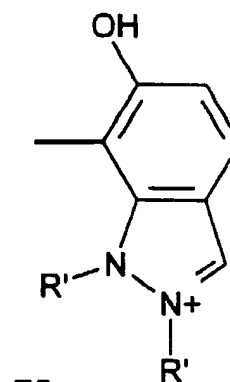
E2



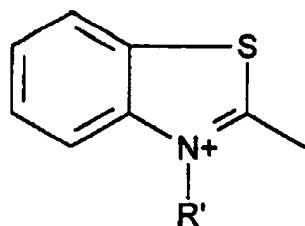
E3



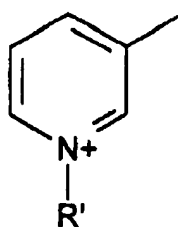
E4



E5

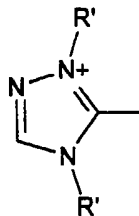


E6



E7

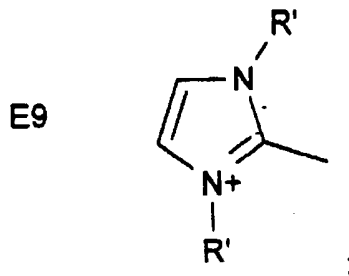
and



E8

in which R' is chosen from C₁-C₄ alkyl radicals;

wherein when m is 0 and when D₁ represents a nitrogen atom, E can be further chosen from structure E9 below:



in which R' is chosen from C₁-C₄ alkyl radicals;

- wherein said second composition comprises at least one oxidizing agent and at least one thickening polymer,

- wherein said at least one thickening polymer is chosen from polymers comprising at least one sugar unit.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000